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**STUDY ON NEW MEDIA
AND COPYRIGHT**

FINAL REPORT

COMMUNICATIONS CANADA

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**STUDY ON NEW MEDIA
AND COPYRIGHT**

Final Report

June 30, 1994

Prepared for

Industry Canada, New Media, Information Technologies Industry Branch

Prepared by

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Executive Summary

This paper addresses copyright in light of technological advances leading to the development of new media. It is the culmination of a study undertaken by NGL Nordicity Group Ltd. for Industry Canada, under the direction of a committee chaired by the New Media Branch, now with the Information Technologies Industry Branch, at Industry Canada, and also involving the Corporate Governance Branch, at Industry Canada and the Cultural Industries Branch of the Department of Canadian Heritage. Key stakeholders were canvassed for their views.

New Media and Copyright Issues

New media consists of hybrids of print and/or electronic media in which the content can include text, sound, graphics, and audio-visual programming. It encompasses enrichment of traditional media (e.g. digital audio broadcasting), combinations of previously separate media (e.g. multimedia) and creation of entirely new ones (e.g. hypermedia).

New media is copyright significant because: support and new media works become intangible; digital technology produces "perfect" copies; rights-clearance becomes more complicated; collective management becomes preferable; technological enhancements increase copyright violations; and payment of tariffs and negotiation of rights becomes more difficult.

The stakeholders who are affected by copyright are users, creators of existing works, producers and developers of new media works, and carriers and distributors of new media.

Copyright Policy

The major issues of copyright policy that need to be examined in the context of new media include: the ownership of copyright (and how owners have formed copyright collectives), the very criteria that determine whether a work is copyrightable, and the exceptions to the creators' (or other rights-holders) rights to their works.

Copyright conveys various forms of rights. Among the **economic rights** it imparts include the exclusive right to reproduce, which is likely the one with the most important new media implications. Once material has been downloaded, it can be reproduced without the creator's ability to track the various copies or economic losses resulting from unauthorized copying. Moreover, the ease of reproduction in digital technology means that there is a difficulty in tracing the source of the first copy and, therefore, in channelling revenues to creators. In a world where electronic distribution of works

becomes more prevalent, arguably, the right of communication to the public by telecommunication can become more important than the reproduction right. Copyright also conveys **moral rights** which, given the ease with which digital works can be copied to perfection, arguably, become crucial in new media to an extent that they were not in non-digital media. In terms of the right of paternity, the creator is not always guaranteed that the work will be credited to him or her. With respect to the right of integrity, digital technology facilitates the mutilation, destruction or modification of an existing work, which in turn can prejudice an artist's reputation.

Canadian copyright law also includes **rental rights** for computer programs and sound recordings. With new media, electronic rental (e.g. through video-on-demand) of content poses copyright challenges in that there is not necessarily an "owner of a rental establishment" or even a network manager who is tracking rights, uses and copying, which raises the issue of who would be responsible for paying rights from rentals.

A number of observers say that neither copyright or patent is a perfect means to protect adequately computer software. If the traditional categories of intellectual property cannot adequately protect new media creations, if existing intellectual property mechanisms cannot at the same time permit the dissemination of new products, then there could be a need for new categories of protection in new media.

Copyright in Practice

The electronic media are fostering a proliferation of new creative forms, some of which require, encourage or facilitate copying. The copying of electronic information allows it to be processed, manipulated, and put to use in ways not possible with print. Copying, therefore, is often not an end in itself, but part of a larger process in which new tools can be applied to data in new ways. This means that copyright infringement in some new media applications is viewed from a different perspective than infringement in traditional media.

Creators and producers point often to the difficulty inherent in clearing rights, tracking uses, and paying for uses, in non-digital media. With new media, these practical problems associated with copyright become exacerbated. In fact, creators, distributors, producers and user representatives refer more often to problems in clearing rights and payments (i.e. issues related to the administration of copyright) than to the rights and the statute itself.

Despite the difficulties they have encountered, these groups are adapting their practices as new media are being adopted. Practices developed before the advent of digital media, such as negotiation through individual contract, collective negotiation, rights registries, etc., are coming to incorporate new media, while other, newer mechanisms, such as technology to perform



"intellectual property accounting", are being developed and gradually implemented.

Policy Considerations

The study finds that, **at this time**, existing copyright policy and mechanisms are adequate for non-digital media. However, there are areas which could be amended or which could require further study for new media, for example: amending or creating new administrative mechanisms; "fair dealing" and the question of "substantial portion"; re-defining copyright to be technology-neutral; and understanding copyright and educating stakeholders.

In light of these considerations, the study presents four approaches to policy development. The study does not suggest one single "ideal" solution, but rather a number of possible alternatives, none of which are mutually exclusive.

1. **Copyright Protection for New Media Ensured Exclusively by Contract.** Contractual practices that incorporate new media or multimedia clauses into existing contracts, as well as technological solutions, could be used to address remuneration outside the copyright framework.
2. **Policy Tinkering and New Modes of Administration.** In light of the continued importance in using copyright to protect works, small changes could be made to the policy, and larger changes to the administration, to ensure that copyright remains relevant to new media.
3. **A Revamped Copyright Framework.** The legislative framework could be revamped by: defining multimedia or new media works in the *Copyright Act* and regarding it as another type of work; or, the *Copyright Act* could be more fundamentally revised to address, not specific types of works, but just "works" (writ large) or "creations".
4. **A Sui Generis New Media Right.** Given that neither patent nor copyright can protect all aspects of a multimedia database, for example, Canada could create a *sui generis* right for multimedia (or new media) works.

The study concludes that copyright is inextricably linked to the economics and structure of the information highway. In general terms, copyright and related policies, and copyright mechanisms can greatly affect the development of content and the distribution of revenues derived from content. As such,

copyright needs to be brought into a broader policy-making arena, for example, through the Advisory Council on the Information Highway.

NB Cette étude a également été publiée en français.

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DISCLAIMER

This study has been commissioned by the Department of Industry. It reflects the views of NGL Nordicity Group Ltd. and cannot be assumed to reflect those of the federal government.

1.0 INTRODUCTION

A new media industry is emerging with important cultural and socio-economic implications for Canada. The products and services of this industry are critical to the implementation of the Canadian Information Highway. The development of these content-based products and services (e.g. books, computer programs, audiovisuals, sound recordings and databases), however, are significantly affected by existing copyright law.

This paper seeks to demonstrate what in new media is copyright significant, review current Canadian copyright policy, identify new media copyright issues, elaborate strategic policy options for government to address these issues, and recommend an optimal approach and areas for further study. The study does not cover, as such, Crown copyright issues. In this introductory section, we describe the scope and terms of reference of the study, as well as our approach to the assignment.

1.1 Scope and Terms of Reference

The federal government has recently released *The Canadian Information Highway: Building Canada's Information and Communications Infrastructure*. This paper sets the stage for the development of a Canadian strategy for the Information Highway, and proposes three objectives to be pursued:¹

- *create jobs through innovation and investment;*
- *reinforce Canadian sovereignty and cultural identity; and*
- *ensure universal access at reasonable cost.*

The scope of the Information Highway strategy is defined as a response to the challenge of the global information economy. New media are at the core of this information society. They are accelerating the use and capacity of computer-based networks that are linked by the existing electronic highway infrastructures. They provide more innovative means to create, organize, store, distribute and access information. Thus, it is in new media where the greatest contribution to a national information strategy can be made.

As the Information Highway paper notes, one of the important bottlenecks to the development of new media on the electronic highway system is the resolution of copyright and intellectual property issues.

¹ Industry Canada, *The Canadian Information Highway: Building Canada's Information and Communications Infrastructure* (Ottawa, 1994), p.2.

The new media environment is posing intellectual property questions that require review of the present copyright framework. This review would demonstrate whether the present framework can be marginally amended or whether it needs to be fundamentally transformed.²

The paper proceeds to ask questions, which include many of the following:³

- Should there be different copyright regimes still classified by type of work (e.g. music, audio-visual, print publishing), and, if so, should there be a new type of work to cover multimedia specifically? Who would then be the creator of the work: the producer or the multimedia maker?
- Are new additional rights, such as display rights, which cover such features as the "look and feel" of software-based products, required?
- Are existing mechanisms for rights clearance and remuneration adaptable to growing multimedia markets as creators of new multimedia works wish to use previously existing works?
- How should moral rights, which protect the paternity, integrity and association of a creator's work, be managed once a work is distributed throughout the electronic highway system?
- Is there a need to review exceptions to copyright, for example the use of copyright materials for educational purposes?

Policies in copyright are required to define the rules or conditions which facilitate creative activity and the sharing of information and other content. Given that digital technology can render new media more accessible to multiple users, use of content can become more difficult to control (and monitor), from the point of view of creators or producers of new works. Developing appropriate policies requires balance between various objectives, such as to encourage sharing of high quality information, promote creation in the country, and contribute to Canada's competitiveness.

In light of the copyright issues arising from new media developments, Industry Canada, Information Technologies Industry Branch, retained NGL Nordicity Group Ltd. to provide information and analysis which would identify copyright policy issues, options and benefits to creators, industry, business users and consumers, and which would, early enough, position the

² Industry Canada (1994), p.25.

³ Industry Canada (1994), p.26.

government to address issues crucial to the development of new media on the electronic highway system. The specific terms of reference of the assignment were to:

- identify the main issues involving copyright and neighbouring rights in Canada, and abroad, with regard to use of new media transmitted on the electronic highway system;
- obtain input on copyright issues and solutions from the major stakeholders, whether copyright holders, new media creators, suppliers, distributors, business users or consumers, in view of facilitating the development of world class new media information services on the electronic highway system that meet the needs of Canadian business users and consumers; and
- elaborate strategic options for government to address the issues.

The interview questions in this study were developed in consultation with Industry Canada staff and dovetail the questions posed in the Information Highway paper. To some extent, then, this report acts as a preliminary review for Industry Canada and responds to most questions raised in the Information Highway paper.

1.2 Approach to the Assignment

NGL Nordicity Group Ltd. combined two parallel approaches for the assignment: interviews, secondary research, discussions within the team and representatives of Industry Canada and Canadian Heritage, and participation in an opportune conference, *Developing Multimedia Products*.

Over the course of several weeks, the project team interviewed key stakeholders for their views on copyright issues and solutions. Included were copyright creators, suppliers, distributors and carriers of new media information services, business users and consumers and policy developers in Canada. A list of those consulted is provided in Appendix A.

All interviewees were asked questions regarding new media on the electronic highway system, and copyright. The questions were structured to be qualitative and open-ended to facilitate discussion. These questions are presented in Exhibit 1-1. The questions and results of the interviews are interspersed with the discussions in the following chapters of this report.

In addition, NGL undertook a review of literature with respect to state of knowledge and identification of the main issues/questions in the area, in Canada and abroad. The review was based on existing reports, briefs and policy papers, conference proceedings, industry and trade literature, official announcements and court decisions, and acquisition of information on digital new media and copyright developments in foreign jurisdictions. The review of foreign

policy and regulatory frameworks focused on the United States and Europe, and key areas of activity on new media and the electronic highway system.

NGL also conducted a scan of relevant discussion groups on the Internet, in particular the **culist.cni-copyright** newsgroup. Discussions within this group were commentary (i.e. responses to questions or remarks), rather than authoritative or informative (i.e. recommending literature) in nature. However, the bulletin board did contain discussions on patent law versus copyright law, as well as fair dealing within an educational context.

Following the interviews and literature review, NGL proceeded to identify relevant new media and copyright issues, as well as strategic policy options. Regular meetings were held with the client to develop our findings and positions.

Both NGL and the client participated in Insight Information Inc.'s conference *Developing Multimedia Products*, held in Toronto on April 28-29, 1994. The papers presented at the conference, which covered the more general issues of copyright and new media, gave both the project team and the client the opportunity to test the structure of the report and the hypotheses developed. In addition, the conference proceedings were extremely useful to our literature review.

A bibliography of relevant print and electronic documents reviewed is provided in Appendix B.

Exhibit 1-1
Interview Questions

Questions asked of all interviewees

Defining New Media Applications

- What possible new media applications are of potential relevance to you?

Existing Copyright Policy

- Are licensing mechanisms in traditional copyright industries, such as television, book publishing and movies, broad enough to permit exploitation in multimedia markets?
- Are commercial contractual arrangements, as opposed to arrangements imposed by legislation, sufficient to protect rights-holders of multimedia?
- Are commercial contractual arrangements sufficient to facilitate the development and communication of multimedia products, and to avoid unnecessary litigation?

Copyright versus Patent Protection

- Is copyright legislation, as opposed to patent legislation, the better mechanism to protect interactive multimedia creations given that both may protect computer software?

Establishing New Copyright Policy

- Should there be different copyright regimes still classified by type of work (e.g. music, audio-visual, print publishing)?
- Should there be a new type of work to cover multimedia specifically? who would be the "creator", the producer or the "multimedia maker"?
- Are new additional rights, such as display rights ("look and feel"), required? Would it be sufficient simply to incorporate such additional rights within the current framework?

Exhibit 1-1
Interview Questions (continued)

Questions asked of all interviewees (continued)

New Copyright Mechanisms

- Regarding artists and creators of copyrighted works (rights-holders), how should rights be allocated with respect to multimedia works?
- Regarding creators of multimedia works, what are possible mechanisms for rights clearance and remuneration? A mandatory clearing system for all contracts? Collectives? A rights registry?
- What mechanisms are required for payment by end-users to rights-holders of previously existing copyrighted works and to creators of new multimedia works? How should the compensation be determined and can it be enforced? Can these mechanisms be designed such that they will not impact the framework as to make its management impossible?
- Should a rental right be applied, as the user has "temporary ownership" of the material, as in the rental of a physical object (e.g. use of information from Internet, BBS)?
- Should there continue to be different regimes of moral rights? How will moral rights affect the incentive for creators of multimedia works to use existing works in their projects?

Additional questions asked of suppliers and users

Copyright and Digitization

- How is copyright in digital multimedia objects affected when we compress the images and change all the digital data but leave perceived images essentially intact?
- Is there an immediate need for copyright protection of new media works or are the horizons more long-term?

New Copyright Mechanisms

- What mechanisms are required to monitor end-user access to copyrighted multimedia services? A Smart Card? User accounts?
- What mechanisms are required for payment by end-users for use of copyrighted multimedia services? How should the compensation be determined and can it be enforced? Can these mechanisms be designed such that they will not impact the framework as to make its management impossible?

2.0 AN OVERVIEW OF NEW MEDIA AND COPYRIGHT

This chapter seeks to explain why the development and exploitation of new media is affected by copyright. The chapter defines copyright in broad terms; defines new media; describes the distinctive qualities of new media which present challenging copyright issues; explains the underlying information infrastructure which will be required to support the development and use of new media; describes the copyright issues that are of concern to new media creators, as well as carriers and distributors; and describes the copyright issues that arise in the new media entertainment, education and training, and information access market segments.

2.1 What is Copyright?

In her recent book, *Canadian Copyright Law*, Lesley Ellen Harris describes how copyright was defined originally as the "right to copy." Today, copyright law consists of as a set of various rights, as well as limitations to rights, which protect creators of literary, dramatic, musical, and artistic works. Through the *Canadian Copyright Act (1985, as amended)*, creators are granted the sole and exclusive right to print, publish or perform a work. These rights give them control over the use of their creations, protection of their reputation, and an ability to benefit, financially and otherwise, from the exploitation of their creations.⁴

In Canada, copyright protection is automatic -- that is, registration is not necessary. The only criteria, however, are that the particular work must be original, fixed in material form (i.e. text, photograph, video, etc.) and created by a Canadian national or resident, or entitled to the *Act*. The protection lasts for fifty years after the creator's death.

Persons protected by copyright under the *Canadian Copyright Act* generally do not have to formally apply for protection in other countries. This is because Canada adheres to two international copyright conventions: the Berne Convention and the Universal Copyright Convention (UCC). As a result, Canadian rights-holders are entitled to some form of copyright protection in more than ninety countries around the world.

Ownership in copyright is granted, in the first instance, to the "author" of the work. The "author" is the person who creates the work or who expresses an idea in tangible form. Two or more authors may collaborate to produce a "work of joint ownership." By rule, the "author" is an individual. However, in the case of works made during the course of employment, then the employer (i.e. a corporation) typically has copyright ownership.

⁴ Lesley Ellen Harris, *Canadian Copyright Law* (Toronto: McGraw-Hill Ryerson Limited, 1992).

Copyright law is part of a larger body of law called "intellectual property." Intellectual property law refers to and protects the intangible or "intellectual" nature of an object, as opposed to the tangible or physical aspect. Patent law is also an area of intellectual property law. Patent law protects an inventor, or patent owner, allowing him or her to prevent others from making, using and selling that invention within Canada for twenty years after an application for a patent is filed. The important distinctions between copyright and patent are discussed in the following chapter on copyright policy.

In 1988, Canada amended copyright law and principles, providing protection to computer software, etc. At present, the federal government is planning "Phase II" revisions to copyright law. The issues being examined include: home-copying, neighbouring rights, and exceptions or special measures for certain categories of users. Existing copyright law is discussed in greater detail in chapter 3.

2.2 What is New Media?

New media consists of hybrids of print and/or electronic media in which the content can include text, sound, graphics, and audio-visual programming. New combinations of traditional media have resulted in a wide range of new information products, applications and services which offer innovative means to create, organize, store, distribute and access information. Traditional media can be enriched and enhanced by new technologies, and as such are considered a part of new media.

In its paper *New Media, New Choices* the federal Department of Communications defined new media as one of the following:⁵

- *enrichment of traditional means of communicating information;*
- *combination of previously separate media; or*
- *creation of entirely new ones.*

Examples of these types of new media are provided in Exhibit 2-1.

Multimedia is an important sub-set of new media, and indeed, the term can be used, in many cases, as its surrogate. However, to be precise, multimedia is a technology which integrates two or more existing or new media forms, such as audio, full motion video, still photographs, graphics, animation, text and data on a single platform. New media is broader since it encompasses enrichment of traditional media, and it includes entirely new areas, such as hypermedia and virtual reality.

⁵ Communications Canada, *Fact Sheet - New Media, New Choices* (Ottawa, 1992).

Exhibit 2-1
Examples of New Media

Examples of new media which enrich traditional forms of communication include:

- *Digital Audio Broadcasting*, which offers an older service (radio programming) through a new technology (digital signal transmission and reception) providing superior quality.
- *High Definition Television (HDTV)*, which is designed to enhance the quality of existing television programming services, but offers the promise of a leap into new markets.
- *Digital Audio and Video Production or Post-Production*, in which traditional cultural activities (such as the recording of music or the making of film) are rendered more precise and less costly through the addition of new technologies within the production process.

New media which result from the combination of previously separate media include:

- *Multimedia*, which is a collection of heterogenous technologies and which will enable information providers and users to process information in a variety of novel ways.
- *Digital Video Conferencing*, which combines features of telephone communication and television transmission.
- *CD-ROM*, in which text storage, graphic display and audio playback capabilities come together within one compact form.

The emergence of entirely new media include:

- *Hypertext*, which allows a user to jump from topic to related topic within internally cross-referenced written information.
- *Hypermedia*, which links not only text but graphics, sound and video from various sources in ways which are multidimensional and cross-linked rather than linear.
- *Virtual Reality*, which provide the experience of entering three-dimensional audio-visual environments.

Source: Communications Canada, *New Media, New Choices* (Ottawa, 1992).

New media development is currently being driven by the adoption of **digital technology** in the creation, production, storage, and distribution of content, whether that be text, audio, image, etc. One of the key attributes of digital new media is its **interactivity**. This means that a user is able to respond to what is presented and affect what is presented next. The key to success with an interactive new media offering is to master the design of "interactivity" in such a way that it will be perceived as interesting and beneficial to a large number and wide variety of users.

Interactivity can be achieved through stand-alone products like CD-ROMs. Increasingly, however, interactivity will be available via networks, whereby the user and information/new content provider can process information and communicate through electronic networks. Differences between media may tend to disappear, while the number of non-fixed works may increase.

What in new media is copyright significant?

- support and works become intangible
- perfect copies
- rights-clearance
- collective management
- control mechanisms
- payment of tariffs and negotiation of rights

While this entire paper addresses this question, there are some basic answers that are provided below. First, technological enhancements to traditional media may increase copyright violation. As discussed in the following subsection, digitization brings with it the ease of transmission and multiple use, as well as ease of replication. Furthermore, the technology produces "perfect" replications. As a result, rights-holders are threatened by unauthorized replication and use, and, as a result, a loss of remuneration. Copyright rules must protect creators from such infringements.

Second, combinations of previously separate media substantially complicate rights clearance, tracking of rights and their use, and in securing payments for the rights-holders. For instance, a producer making a CD-ROM, which contains music, an article, visuals and clips from a TV show must obtain permission from each of the appropriate rights-holders for each of the necessary rights. Further, end use is difficult to predict. This can become quite a tedious and time-consuming task. Copyright administrative mechanisms may then need to be upgraded. For example, clearing rights at a single source (e.g. through a collective), rather than going to individual rights-holders may be a better approach.

Third, the ease of access and multiple use of works raises concerns for new media creators. As a result, creators of copyright works may require new or additional mechanisms to keep track of the use of their works, determine and collect payment, and protect themselves.

Fourth, entirely new creations of media also pose significant copyright challenges. New media works become intangible -- inherently non-fixed. For example, hypermedia makes it difficult to measure the "length" of the work and determine appropriate remuneration. Creators will also want these issues addressed to ensure proper support and compensation.

If rules, procedures and practices which facilitate creative activity and the sharing of information and other content are not defined, it could hamper the development of new media, and consequentially the Information Highway. Thus, the copyright issue is significant.

2.3 The Enabling Technologies

As stated in the previous subsection, new media development is driven by the adoption of digital technology in the creation, production, storage, and distribution of content, whether that be text, audio, image, etc. Certain distinctive qualities of the digital medium present challenging copyright issues and may require changes to copyright law. These characteristics include:

Ease of Replication

Digital works can be easily reproduced using new and improved reprography technologies. Digital works can also be replicated employing the same technology one needs to manipulate the digital work. Furthermore, the technology produces "perfect" replications. A classic example of ease of replication is the home taping of digital audio music channels.

The ease with which works in digital form can be reproduced poses a great many challenges for copyright law. Copying by means of new technologies has made it more difficult for copyright owners to exercise control over replication of their works. This, in turn, means a loss of remuneration if unauthorized copies are privately or commercially distributed.

Ease of Transmission and Multiple Use

Digital applications and services can be put not only in a stand-alone system, but also loaded into a computer which is hooked up to a network of computer users or a network of users of a large computer system. On this network of networks, each user can have ready and virtually simultaneous use of the same copy -- perhaps a pirate copy. A classic example of ease of transmission and multiple use is the Internet, for which there is no easy way to charge for use of material on, nor to stop subsequent use of materials.

With the transmission of digital media over a network, copyright creators will want to know how many times a given work is being used, and arrange appropriate payment mechanisms as

a result. Copyright creators will also be concerned with what users will do with materials they can access. Since they are in digital form, they are easy to replicate and/or manipulate.

Plasticity

Digital works are inherently non-fixed. As a result, users can alter the wording, update the information, manipulate photographs to add what was not there, chop a sound recording into sound bites that can be remixed and combined with sound bites from other recordings to produce a new recording, etc. Such changes can occur quickly and without anyone being able to tell that the changes have been made.

The plasticity in digital media gives copyright owners more reason to be concerned about what an individual does with his or her copy of the work. Users can customize it and resell it to someone else. Users can also modify the work in such a way that it misrepresents what the author meant to say. Thus, the plasticity in digital media could have a dramatic impact on the "moral rights" of the creator, i.e. the reputation of the creator (writer, performer, etc.).

Equivalence of Works

Once in digital form, works become less differentiated by type of work (e.g. book, film, etc.) because they will all be in the same digital medium -- they will all be "0s" and "1s". Thus what is digitized music becomes equivalent to digitized text which becomes like digitized images and so forth. Digital technology makes these separate works technology equivalent for production, storage and transmission.

This equivalence of works in digital form will make it increasingly easy to create a difficult-to-classify work by combining what have previously been thought of as separate categories of works. Consequently, the elaborate distinctions copyright law has made among different kinds of works may lose much of the meaningfulness they had when media were more differentiated. As a result, new media producers may gravitate towards rights clearance at a single source, rather than clearing rights across the range of individual rights-holders of individual works.

Compactness of Works

Works in digital form do not take up much space. Compression squeezes digital data so that more of it can be stored on disk or more can be sent using a given amount of transmission capacity or bandwidth. In addition, the compactness of digital data will permit new assemblages of materials that would be unthinkable in a print world (i.e. encyclopedias, specialized libraries, etc.).

The compactness of digital media makes it inherently easier to steal. This will cause distributors of intellectual property to have more interest in controlling access to and uses of protected works in digital form. Furthermore, the compactness, through compression, has some observers questioning whether, as works are compressed and later de-compressed, they may be losing, in a number of cases, some of their characteristics (e.g. an image may not be as clear or precise as the original); the "moral rights" of creators would then be affected

Non-linearity

Digital media can be searched and linked using non-linear methods. Depending on the level of sophistication of the hypertext, much more than simple keyword searches can be created. For example, texts can be linked to other parts of the text with the "click" of a mouse, or a bookmark trail can be created through the digital text.

The new capacity for searches and linking of works in digital form raise a host of intellectual property issues. Among the many copyright questions raised is how to measure the "length" of a work, especially when it comes to determining remuneration for rights-holders whose works are somehow incorporated into a digital work. Another question is whether creating a search trail through digitized text is itself a protectable work of authorship for which some recompense is appropriate.

2.4 Information Infrastructure

In order to support the development and use of new media, an all-digital, all-switched, broadband network, that is universally accessible, will eventually be required. It will combine the features of current telephone and cable television networks, overcoming the limitations of each; it must be capable of transmitting high data rates to deliver mixtures of digitized voice, music, video, text and data from one point to any other point.

All developed countries have recognized the critical value of information highway systems to economic growth. In the United States, Vice-President Al Gore is leading efforts to put the country's National Information Infrastructure in place. In Canada, the federal government has helped create CANARIE (the Canadian Network for the Advancement of Research, Industry and Education) as one important instrument to stimulate Information Highway development.

As indicated earlier, the federal government has also recently released *The Canadian Information Highway: Building Canada's Information and Communications Infrastructure*. In

addition to the three objectives cited in subsection 1.1, this paper also asserts that the national strategy will be guided by four principles:⁶

- *an interconnected and inter-operable network of networks;*
- *collaborative public and private sector development;*
- *competition in facilities, products and services; and*
- *privacy protection and network security.*

As the document notes, each of the main communications sectors has operated quite separately in its development and deployment. The principles suggest a direction toward inter-operability between networks and collaboration among them, and at the same time a recognition of greater competition in facilities, products, and services.

Key to the exploitation of new media products and services on the Information Highway are three stakeholder groups, namely creators, carriers and distributors, and users. The following subsections seek to describe the copyright challenges facing these groups.

2.5 Creators of New Media

Key to the information economy are new media creators, including:

- creators of existing works, e.g. writers, lyricists, performers;
- producers of conventional media, e.g. film producers, book publishers; and
- multimedia developers, e.g. databases, CD-ROMs, computer games.

Creators of existing works are "authors" and, therefore, are the copyright-owners. Performers can hold "neighbouring" rights over their performances of copyright works. Producers and developers, which use existing works in their creations, must obtain authorization from these "authors" to use their works. Given the multitude of works which can be incorporated into a multimedia creation, multimedia producers and developers could face a tedious and time-consuming rights-clearance process.

As new technology brings about interactive applications, which are transmitted over an electronic highway system, new media creators and producers will become increasingly concerned with the commercial practices of copyright. For example, creators of existing works will want to ensure that mechanisms for rights clearance and their remuneration are adaptable to growing multimedia markets as creators of new multimedia works wish to use their works. Rights-holders will also want to ensure that their works are not altered in such a

⁶ Industry Canada (1994), p.2.

way as to misrepresent what they originally meant to say. Another concern to copyright creators is that appropriate mechanisms to track use and collect payment are set in place.

All copyright creators are concerned with the protection of their work, as well as their reputation. As stated earlier in this chapter, digital media is "plastic". As a result, creators are concerned about what an individual can do with his or her copy of the work. Users can customize it and resell it to someone else or modify it in such a way that it misrepresents what the author meant to say.

Appropriate remuneration is also of concern to all copyright creators. With ease of replication, transmission and multiple use, rights-holders have reason to worry about loss of remuneration if unauthorized copies are privately or commercially distributed.

Copyright owners may exercise their rights on an individual basis or as a "group" through a collective. When a rights-holder is a member of a collective, the rights-holder permits the collective to negotiate royalties on his or her behalf. These royalties are collected from users of copyright materials and, once collected, are distributed back to the appropriate copyright owners. In addition to dealing with royalties, some collectives may take appropriate action to defend a violation of copyright or may provide assistance in defending the interests of its members. For example, collectives may insist upon the development of technical solutions for tracking electronic uses, in monitoring such uses and in enforcement.⁷

2.6 Carriers and Distributors

As new media emerges, carriers and distributors take on new roles. Carriers and distributors of new media include telecommunications carriers, cable operators, broadcasters and information providers. These groups face particular copyright-related concerns with the extension of the Information Highway and its increased use. One concern relates to liability of carriers regarding copyright, which can result in some form of censorship. Carriers are making a strong case to maintain a separation between carriage and content, ensuring that they are not held liable for the content they carry.

In our discussions with **telecommunications carriers**, for example, we noted that they had traditionally viewed themselves as pure "carriers", with little or no impact on the content of material carried. With trials of video-on-demand currently under way, however, carriers now have to consider the question of liability, as well as become involved in the issue of copyright, if only out of concern for the viability of new services requiring the facilities of carriers. In addition, as carriers become more involved in producing and distributing new

⁷ Harris (1992), p.143-145.

media, they will also have to examine tracking of users and developing methods of remunerating rights-holders.

Cable operators, in contrast, are already familiar with copyright, through retransmission rights for the programming carried on distant television and radio signals, and (as cable programmers on community channels) program rights and other rights associated with television broadcasting. New media present cable operators with new copyright challenges, however. For example, interactivity on Vidéotron's "Videoway" package has led to new definitions of the length of works and the payments due to rights-holders (as per the Union des Artistes independent production agreement).

The information highway could present new opportunities, and new copyright issues as **broadcasters** exploit new business opportunities arising from the development of digital transmission capabilities. Broadcasters have addressed copyright issues through the retransmission right (with cable operators), and through rights clearances in program acquisitions, payments to collectives, and the creation of new works (in their capacity as producers of programming).

Newspaper publishers form one of the more important new media distributors without owning underlying facilities. They are also both users of copyright material as well as creators of copyright that must be protected. In any extension of traditional newspaper publication into new media, whether it be CD-ROM or remote information base access format for content, newspaper publishers are building on their traditional practices involving copyright to the challenges of new media applications.

2.7 Users

The opportunities that new media may create are generating excitement in the areas of entertainment, education and training and information access. While applications in these areas have often been embedded on stand-alone technologies, like CD-ROM or laser discs, more and more are being transmitted over a network. Transmission of new media over a network raises more complex copyright issues than CD-ROMs. Below is a brief description of copyright issues that arise in these new media market segments, as a result of electronic transmission.

2.7.1 Residential Entertainment Market

The largest potential market for interactive multimedia applications, by far, is the residential entertainment market. This is evident from the number of alliances that are taking place, as well as from the large amounts of money being invested in interactive hardware, software and services by consumer electronics and personal computer manufacturers and

content providers. For example, in the United States, Tele-Communications Inc., Sega of America Inc. and Time Warner Entertainment Co. recently unveiled plans for The Sega Channel, an interactive cable TV channel providing video games.

New media applications in the home entertainment market fall into a continuum which ranges from pure entertainment applications (like video games) to pure information applications (like databases). To illustrate this continuum, imagine television (pure entertainment) on one end, magazines (pure information) on the other end, and books (some entertainment and some information) in between. Thus, this market segment is entertainment, including "edutainment" and "infotainment".

New media entertainment applications are already available for use on television or home PCs equipped with Compact Disc - Read Only Memory (CD-ROM) drives. However, technologies like Compact Disc Television (CDTV) and Compact Disc Interactive (CDI), which combine television, personal computing and compact disc player, will bring interactive entertainment and information services into the home using CD-ROM-based systems. These new technologies, with their greater storage capacities, will enable new media developers to include "real" voice and video with high resolution colour.

2.7.2 Educational and Training Market

Quality of education has become a critical issue for educators, legislators, employers and parents alike as they acknowledge that traditional teaching methods are not sufficiently effective. However, interactive multimedia courseware, combined with traditional instructional methods, could help to alleviate this educational dilemma.

Interactive multimedia seems ideally suited for educational purposes because it brings the visual power of television and the interactive power of computers into the classroom in a familiar format. Educators have known for a long time that students learn best when actively involved in the process. This fact has been reinforced by more than 30 studies which concluded that interactive multisensory-based technologies speed learning and often increase test scores.⁸

Distance learning is also growing in popularity in the educational community. Tele-learning results from applying the technology to education. For example: education comes to a student, instead of vice versa; learning on-demand, any time, any topic, 24 hours a day; learning at rates best suited to individuals; and electronic educational institutions with full accreditation.

⁸ According to Rodney L. Miller, editor of *The Multimedia and Videodisc Monitor* newsletter.

Corporate trainers are also adopting new media applications to train their staff. Training that is accessible on demand, portable, flexible and re-usable is what is required today -- the traditional "one-size-fits-all" approach to training can no longer meet the needs of an increasingly diverse and unskilled workforce. Interactive multimedia training offers an appropriate solution to corporate trainers because these applications encourage on-site, self-paced learning.

While attractive to educators and corporate trainers, as well as students, new media in the world of education and training present challenges to rights-holders. One issue is the very limited exceptions that the *Copyright Act* provides to libraries, archives and educational institutions. Rights-holders recognize a growing education market, and want to earn revenues from it. As a result, they do not want users to be exempted from copyright.

The debate over whether and the extent to which the *Copyright Act* should provide exemptions for educational, library and archive use has been going on for years and continues to be strong. To help overcome this problem, some license agreements have been signed with CanCopy for reprography in schools. However, rights-holders hope that the exceptions, which are being revisited under "phase 2" and which will soon be in the law, are limited exceptions and the majority of uses of copyright materials will require permission and payment.

2.7.3 Information Access Market

The information access market is part of the entertainment market in that it is at the information end of the spectrum. Applications in this area include information services offered via the Internet, as well as commercial databases, such as Prodigy. These applications are of interest to both home consumers and business/institutional users.

Computer-based networks that are linked by the existing information highway infrastructures are already growing in use and capacity to accommodate the progression to an electronic highway system. The Internet, for example, is growing rapidly along with hosts, user traffic, information and networks due to support from individuals. By the end of 1993, there were over 11,000 networks, 50,000 databases, and 1.7 million host computers hooked up to the Internet worldwide. There were an estimated five million to 15 million individual users and the number is currently doubling annually.⁹ As a result, traffic is growing at an astounding rate of 15 to 20% per month.¹⁰

⁹ Doug Powell, "Exploring the World of Internet," *Computing Canada*, 19, 22 (October 25, 1993): 1-2.

¹⁰ Seybold Publications Inc., "Online Publishing '93: Spotlight on Internet, Typography on Screen," *The Seybold Report on Publishing Systems*, 22, 15 (April 26, 1993): 24-28.

Although business applications on the Internet are relatively new, the number of commercial users surpassed traditional users for the first time in 1993. Entrepreneurs are finding new ways to set up businesses with the help of commercial service providers, such as Nova Scotia Technology Network (NSTN). NSTN has a virtual "shopping centre" -- Cybermall -- and is renting virtual space to businesses that want to display and sell their wares.

Over the last few years, there has been considerable growth in on-line commercial databases. For example, financial databases are currently available, including Dow Jones, Reuters, the Financial Times and Infoglobe, as are newspapers such as Night-Ridder, McGraw Hill and Thompson. Existing scientific and professional databases include Dialog and a host of specialized databases, i.e. geological, medical and legal.

More recently, information supermarkets have emerged offering access to a wide variety of databases. Typically, these offerings include games, E-mail and some transactional services. The most common of these are Prodigy, America Online and CompuServe, all of which are based in the United States. The most important Canadian players in this field include Southam, TorStar Corporation and Thompson Corp.

While the electronic dissemination of information is growing in popularity, no one has quite figured out the economics of charging for intellectual property in an electronic environment. There are no effective metering mechanisms, nor billing or financial settlement systems. As a result, without a fixed form, information providers can not deliver the embedded advertising required to support the marketing of the service. That is why many information providers, such as newspaper and magazine publishers, sell print in addition to electronic services.

2.8 Conclusions

The preceding sections have demonstrated that new media applications are proliferating, particularly in the areas of entertainment, education and training, and information access. The number of works being created in these areas are multiplying, e.g. video games, movies-on-demand, education courseware, on-demand books and periodicals, interactive information systems and transactional services.

New media creators, developers, carriers and other stakeholders have adapted, in the past, to new technologies. For example, when computer programs came on the scene as works distinct from computer hardware, they appeared as a new form of "authorship" in a new medium of expression. However, they were soon embraced by the protection of copyright law. The nature of new media technology (e.g. digitization and interactivity), however, raises new challenges, such as copyright clearance.

Clearing copyright for exploitation of new media on the Information Highway poses unique challenges. The attributes of new media, namely, ease of replication, ease of transmission,

plasticity, equivalence and compactness of works, and non-linearity, threaten the legal use of copyright works, remuneration to rights-holders and the reputation of creators. Identifying and satisfying the numerous legal requirements demands a multi-discipline approach, a detailed understanding of the cultural industries involved, and an appreciation for the current and future intended use of the licensed works.

In conclusion, the infinite number of new media applications and creations, the attributes of digital media, and the unknown future, with respect to the Information Highway, the exploitation of new media on the highway and the intended use of the creations, present a number of serious copyright challenges. The following chapters addresses some aspects of copyright policy that are relevant to new media and the Information Highway, some of which have been introduced in this chapter of the report.

3.0 COPYRIGHT POLICY

In this section, we address the major issues of copyright policy, in Canada and internationally, that are relevant to the discussion of new media and the Information Highway. The chapter is not intended to provide an exhaustive analysis of all copyright, patent and other intellectual property protection, or to provide any sort of legal advice, but rather, to examine some specific copyright measures that will re-emerge in the discussion of issues and policy revisions.

3.1 Copyright Criteria

Copyright law, as one author points out, is predicated on a basic balance: encouraging creators to create new works, versus ensuring reasonable access to those works by consumers. While copyright covers the expression of ideas, it does not protect ideas themselves, and it does not cover facts (just their expression).

Generally, copyright applies to most kinds of creations, including "literary, dramatic, musical and artistic works." It also applies to sound recordings and audio-visual works. Computer software is defined in the *Copyright Act* as a literary work.

3.1.1 Ownership of Copyright

Ownership of copyright is granted, in the first instance, to the "author" of the work. The "author" is the person who creates the work or who expresses an idea in tangible form. For example, the "author" is the person who puts music in writing, or writes a poem. In the case of works made during the course of employment, then the employer has copyright ownership, under certain conditions (the employee retains her or his moral rights).

The owner of a copyright work (or anyone authorized by that owner) has a number of rights in that work. These rights are discussed in detail below. The copyright owner may "license" his or her rights, which means temporarily allowing others to use them, or the owner may "assign" the rights, i.e. permanently give those rights away. Copyright works may be licenses or assigned either in whole or in part, and can be divided by type of rights, length of time, and geographical territory. Copyright can also be passed on to other persons through a will. The value of rights is fully negotiable and determined by the marketplace. It is important to understand that, when copyright holders license or assign their copyright, they still retain the moral rights (discussed in Section 3.3 below).

Copyright holders can negotiate their rights on an individual basis, or do so through a copyright collective and other associations. Exhibit 3-1 shows the collectives that exist in Canada and the types of works and rights they are concerned with.

There are a few exceptions set out in the *Copyright Act*, where consumers are not required to request permission for or pay for the use of copyright materials. While it does not constitute an exception per se, "fair dealing" (discussed in further detail below) provides for some flexibility. As well, there are some "compulsory licenses" in the *Copyright Act*, where the copyright holder does not have the right to authorize the use of his or her work, but is paid for those uses: this is the situation, for example, with the right of retransmission.

Several criteria apply to copyright protection. These are discussed below.

3.1.2 Originality

The work must be original, i.e. an original expression (in other words, not copied). Compilations, however, are protected as original works if sufficient labour and some degree of originality have been required to produce them. In terms of new media and multimedia, therefore, even digital compilations that incorporate existing "original" works are copyright-protected, if the selection and arrangement of the works can be considered original.

3.1.3 Fixation

The work must be fixed in material form, since it is difficult to prove the existence of an unfixated work. Therefore, works of sounds or images that are transmitted by broadcast or cable (or other means) without being fixed before or at the time of transmission, are not copyright protected. This last case becomes important in the case of new media, especially when the creator of a new work chooses to transmit the work "in progress" without fixing it, and when someone else does fix the work (e.g. storage on hard drive or printing a hard copy). Screen images are not "fixed", unless they are saved on disk or printed out.¹¹

With the advent of digital re-mastering of sound recordings, as well, there arises the difficulty of identifying the original fixation: as the recording is "improved", it can lose those aspects which made it identifiable with a particular performer (or composer). This raises issues of use without the performer's consent, and moral right

¹¹ Even in the North American Free Trade Agreement provisions regarding the rental right, passed in May of 1993, there is reference to "records, perforated rolls and other contrivances by which sounds may be mechanically reproduced", but digital reproduction is not mentioned.

Exhibit 3-1
Copyright Collectives

Collective	Members	Rights
Literary Works		
Canadian Reprography Collective (CanCopy)	writers and publishers of English language print materials	reproduction rights
Union des écrivains québécois (UnEQ)	writers and publishers of French language print materials	reproduction rights
Dramatic Works		
Association of Canadian Television and Radio Artists (ACTRA)	writers and performers	contractual agreements for performance rights
Director's Guild of Canada (DGC)	directors	contractual agreements
Playwrights Union of Canada (PUC)	writers of English language scripts for plays	rights to amateur performances and sometimes professional performances
Société des auteurs et compositeurs dramatiques (SACD)	writers of French language scripts for plays, television programs and movies	rights to public performance, both amateur and professional
Musical Works		
Society of Composers, Authors and Music Publishers of Canada (SOCAN)	musical composers, lyricists and publishers from across Canada and around the world	non-dramatic performing rights, or "small rights" in musical works
American Federation of Musicians (AF of M)	musical composers, lyricists and publishers from across Canada and around the world	contractual agreements for performance rights
Sound Recording and Other Mechanical Contrivances		
Canadian Musical Reproduction Rights Agency (CMRRA)	musical composers, lyricists and publishers from across Canada and around the world	audio and audio-visual reproduction rights in musical works in the form of synchronization licences and mechanical licences
Society for Reproduction Rights of Authors, Composers and Publishers in Canada (SODRAC)	musical composers, lyricists and publishers from across Canada and around the world	audio and audio-visual reproduction rights in musical works in the form of synchronization licences and mechanical licences

Note: ACTRA, DGC, PUC and AF of M are not collectives under the copyright meaning of the word. That is, they do not issue blanket licences, thereby eliminating the need for a multitude of permissions to clear copyright.

**Exhibit 3-1
Copyright Collectives (continued)**

Collective	Members	Rights
Sound Recording and Other Mechanical Contrivances (continued)		
Audio Video Licensing Agency (AVLA)	musical composers, lyricists and publishers	rights to reproduce a master audio recording, rights to reproduce a music video, or rights to show it in public or on television
Music Videos		
L'association québécoise de l'industrie du disque, du spectacle et de la vidéo (L'ADISQ)	musical composers, lyricists and publishers	rights to reproduce a music video, or rights to show it in public or on television
Artistic Works		
Vis*Art Copyright Inc. (Vis*Art)	visual or graphic artists, designers, craftpersons, cartoonists, illustrators, printmakers, illustration artists, sculptors, video artists and architects	rights to exhibit an artistic work, or reproduce it, i.e. on the cover of a book, in a calender, or for use in a television programme
CARFAC Copyright Collective (CARFAC)	visual or graphic artists, designers, craftpersons, cartoonists, illustrators, printmakers, illustration artists, sculptors, video artists and architects	rights to exhibit an artistic work, or reproduce it, i.e. on the cover of a book, in a calender, or for use in a television programme
Retransmitted Works		
Canadian Retransmission Collective (CRC)	independent Canadian film and television producers	retransmission rights
Canadian Broadcasters Rights Agency (CBRA)	private Canadian broadcasters including privately owned affiliates of the CBC and Radio-Canada networks	retransmission rights
Canadian Retransmission Right Association (CRRA)	CBC/SRC, Radio-Québec, ABC, CBS and NBC	retransmission rights

3.1.4 Nationality and Place of Publication

The work must be created by a Canadian national or resident or by a person entitled to national treatment under the Act.

Canada is signatory to the Berne Convention and the Universal Copyright Convention. The Berne Convention, or the "International Union for the Protection of Literary and Artistic Works", was concluded in 1886; Canada is a member at the 1928 level. Over one hundred countries are signatories to this Convention; these countries offer national treatment to other Berne countries (i.e. protection to non-nationals of a Berne signatory is afforded according to the laws of that country).

3.1.5 Exceptions to Copyright

We have mentioned some limitations to the creator's right to authorize the use of works (i.e. compulsory licenses) and ways in which creators may assign or waive rights. In this subsection, we will address two additional situations where copyright does not apply: use of works in "fair dealing", and "public domain works."

i) **Fair dealing**

The principle of "fair dealing" provides a defence in courts to the claim of copyright infringement when a user copies "substantial portions" of works for the purposes of private study, research, criticism, review, or newspaper summary. It applies to all users of copyright materials: individuals, teachers, libraries, etc.

"Fair dealing" is not defined in the *Copyright Act*. Some court cases have dealt with it, but none has clearly established a definition. The five uses set out above are not further explained in the Act, but seem to be interpreted narrowly. For example, "private study" or "research" do not seem to extend to multiple copies for classroom use. "Criticism" usually refers to quotes and extracts from a work to illustrate a commentary on it. One court case has stated, "*... a critic cannot, without being guilty of infringement, reproduce in full, without the author's permission, the work which he criticizes.*" A critic writing about a particular painting may argue, however, that reproduction of the entire painting in a newspaper article is necessary for review purposes. In addition, the overall use of copyright material must be "fair." In determining (quantitatively and qualitatively) whether a particular activity is fair dealing, the user must first consider whether a "substantial part" of the work is being copied (see also the section on reproduction rights, below). At present, there are no court cases in Canada which have applied the fair dealing provision specifically for new media.

Fair dealing is **not** interchangeable with the U.S. concept of "fair use." The U.S. concept is broader, and captures more uses of copyright materials, such as, "criticism, comment, news

reporting, teaching (including multiple copies for classroom use), scholarship or research." It also sets out the factors a court must examine in considering any particular case: the purpose and character of the use; the nature of the copyrighted work; the amount and substantiality of the portion used in relation to the entire copyrighted work; and the effect of the use upon the potential market for or value of the copyrighted work. Note that these factors are not dissimilar to the ones a Canadian court would take into account. One of the major differences between fair dealing and fair use, though, is educational use: it is not specifically mentioned in fair dealing and is specifically referred to in fair use as "teaching," including multiple copies for classroom use. In Canada, multiple photocopies for classroom use would have to be cleared and paid for, most likely through CanCopy or UnEQ.

It is interesting to note the comments of the drafters of the U.S. copyright legislation with regard to the fair use provision. They stated that *"there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change ... [The] courts must be free to adapt the doctrine to particular situations on a case-by-case basis."*

ii) Public domain works

Once copyright has expired (i.e. generally 50 years after the death of the creator), then the work is no longer copyright-protected and can be used freely without the user having to obtain permission from, or compensate, the copyright owner (e.g. in the case of the original edition of Lafontaine's fables or Shakespeare's plays). Some works can also be copied freely if the copyright owner so authorizes, even if the copyright protection has not expired (e.g. computer shareware, scholarly papers). Users still need, however, to know that the work can be freely copied.

3.1.6 Copyright Registration

In Canada, a creator or copyright holder is not required to register a work, in order for the work to be copyrighted; copyright is automatic. Should there be court actions to determine that a work exists and that it has a particular owner, however, copyright registration can be useful to the copyright owner. Moreover, in the case of copyright violation, the copyright owner of a registered work might be able to claim monetary compensation, rather than just stopping the illegal act. Finally, the registration office can be a starting point for developers of multimedia products wishing to locate rights-holders in order to negotiate uses of their works.

Interested copyright owners can register their work with the Canadian Copyright Office. They must provide certain information on the work, but do not deposit the work itself (in fact, the Office will return the work), nor does the Copyright Office validate the information on the registration form. The form, requires the copyright owner to provide his or her name and address, the type of work (literary, artistic, musical, dramatic, or a "mechanical contrivance",

that is, a device by which sounds are mechanically reproduced, e.g. records, cassettes, CDs, etc.), its title, the author's name and address, a date and signature. In some cases, a work combining two or more types of work would be registered as all of those types of work: a book containing text and illustrations becomes a "literary" and an "artistic" work; a book of songs would be a "literary" and "musical" work. A multimedia work, we have found in speaking with the Office, is registered once, but under all the types of work it incorporates. For example, a multimedia CD-ROM encyclopedia combining text, sounds, photographs, on a CD, is registered as an artistic, musical, literary, and mechanical contrivance type of work. There is no specific category, for the purposes of registration, that permits "multimedia" type works. In fact, the categories seem to reflect the types of works set out in the Copyright Act, which does not include multimedia works specifically.

In the U.S., where there is a much more complex and detailed registration system, multimedia works are registered separately, depending on the content of the work. Therefore, in the absence of a single registration form for "multimedia" works, one or more registration forms might be required in order to protect the entire multimedia work. This could prove tedious and time-consuming, and involves added fees for each registration application.

Registration is important when one wants to distribute the work to any extent, as registration provides the copyright holder with certain benefits, should the rights holder need to institute a court action for copyright violation. Because the copyright office in Canada will not deposit copyright works, many Canadians who choose to register their works do so in the U.S., where deposit is necessary for registering a work. In certain sectors in Canada, non-copyright registries have evolved in order to allow a depository for copyright holders, which will provide them with proof of their work. For instance, the Writer's Guild of Canada has a registry for film and television scripts, treatments, etc. In the absence of depositories in Canada, other sectors might find it worthwhile to establish similar non-copyright depositories.

In the following sections, we will examine copyright in terms of economic rights, moral rights, and neighbouring rights. Exhibit 3-2 lists the specific rights we are considering

Exhibit 3-2
Main Categories of Rights in Copyright

Economic Rights	Reproduction Public Performance Exhibition Communication by telecommunication Publication Prohibition of import Adaptation Authorization Translation
Moral Rights	Paternity Integrity Association
Neighbouring Rights	Performers and producers of sound recordings Performers in audio-visual works Broadcasting organizations
Other Rights	Rental rights

3.2 Economic Rights

The creator has a number of rights which allow his or her to be monetarily compensated for the use of his or her works. These "economic rights", in general, allow creators to authorize or prohibit the use of their work. In most cases, economic rights apply for 50 years after the calendar year in which the author died, although for photographs, the term is 50 years after the end of the calendar year in which the original photographic negative was made, and for "mechanical contrivances" (e.g. sound recordings), the term is 50 years after the calendar year in which the original plate was made.

3.2.1 Reproduction Rights

The *Copyright Act* confers upon the rights-holder the exclusive right to authorize the reproduction of a work or a substantial part of a work in a material form. The "substantial portion" aspect of this right is not specified and is left to the interpretation of courts, as each case may be different. Generally, the courts would consider the quantity of the portion used in the context of the length of the whole work, and the importance of the portion to the entire

work. If less than a "substantial portion" is used, then there is no payment to the creator and no need to provide an exception.

The reproduction right also protects against the reproduction of a given work in another form (e.g. reproduction of a painting in a photo, or entering an article into a computer, or even photocopying). Jurisprudence has established that the reproduction does not have to be readable by humans in order to be copyright protected (as is the case with computer languages).

It can be in the interest of users and creators to have recourse to collective mechanisms for rights enforcement and collection, given the difficulty for users to track individual rights-holders and negotiate each single use. This is particularly true for photocopies and for the mechanical reproduction of music. Relevant copyright collectives for photocopying are CanCopy and UnEQ. In the case of the mechanical reproduction of music, there are the CMRRA, and SODRAC. Finally, for the visual arts, Vis*Art and CARFAC exist.

New media considerations

In terms of copyright, the problem is more with material that is "downloaded" from a network or a CD-ROM, than with users who "browse" material. In fact, "downloading" would be a reproduction (for the purposes of copyright). Once material has been downloaded, it can be reproduced without the creator's ability to track the various copies or the economic losses resulting from unauthorized copying. Moreover, the ease of reproduction in digital technology -- the ease of making "perfect" copies -- can encourage the making of private copies. There is also difficulty in tracing the source of the first copy, and therefore in tracing the first unauthorized reproduction. Finally, people believe that it is legal to make copies for private use (as with home taping), and are therefore unaware of the current restrictions to copying.

In addition, one of the attributes of digital media is non-linearity, i.e. users can search and link without progressing along a predetermined, single-outcome path. This can be particularly the case with hypermedia and multimedia databases. Because of non-linearity, however, it becomes difficult to assess which works or parts thereof will be contained in the multimedia work. Also at issue in cases of parts of works is what constitutes a "substantial portion" of the works used by each individual consumer.

3.2.2 Public Performance Rights

This right refers to the right to perform a copyright work in public. The law defines "performance," (any acoustic representation of a work or any visual representation of any dramatic action in a work, including a representation made by means of any mechanical instrument or receiving device), but not "public" (left to be dealt with by courts).

As in the case of reproduction rights, certain collectives exist in Canada to facilitate, on one hand, rights clearances for users of copyrighted works, and on the other hand, control of use and remuneration for creators. One example is SOCAN, which collects performing royalties for composers, authors and publishers of musical works, and arranges licensing for users of SOCAN's repertoire.

New media considerations

One subject of discussion with regard to public performance rights is the display of material on computer screens. Essentially the issue is this: if a work is shown "in public" on a computer screen, does this constitute a public performance? Alternatively, would it fall under an expanded exhibition right (see next section)?

3.2.3 Exhibition Right and Computer Screen Displays

The exhibition right applies to works of art: paintings, sculptures, drawings, photographs and engravings. It entitles creators of such works to control the use of their works and to receive royalties when the works are exhibited in public.¹² The right is worded as a right "*to present at a public exhibition, for a purpose other than sale or hire, an artistic work*" The definition of "public" (as in the case of "public performance" rights) is left to the courts, which would consider the actual location of the work (is an office "public"? Is art displayed in a bank considered a "public exhibition?"), the purpose of the exhibition (decoration, or an actual art exhibit?), the audience and its size, etc. The exhibition right was incorporated into Canada's Copyright Act only in 1988, and therefore applies only to works of art created after that time.

New media considerations

The case of computer screen displays might fall under exhibition rights, or under public performance. The U.S. *Copyright Act* has a right of public display which was adopted, essentially, because certain forms of works could not benefit from traditional rights, like reproduction and public performance. The display right does not apply to sound recordings or audiovisual works, with certain exceptions. A "display" is defined as "a copy of it, either directly or by means of a film, slide, television image, or any other device or process or, in the case of a motion picture or other audiovisual work, to show individual images non-sequentially." To show the text of a literary work on a computer screen would be considered a display, rather than the making of a copy, and will infringe the law if the screen display is projected to the public, including an aggregate of displays to individual computer users at individual terminals (e.g. users all working from a single CD-ROM server).

¹² Harris (1992), p.99.

The display right is subject to a number of exceptions. For instance, the display right is not infringed where a copy is publicly displayed either directly or by the projection of no more than one image at a time, to viewers present at the place where the copy is located. Therefore, it is not an infringement to display a work to a public gathering or to project an image of the work on screen. It is also not an infringement to display a legal copy of a work "by instructors or pupils in the course of face-to-face teaching activities of a nonprofit educational institution, in a classroom or similar place devoted to instruction", or with respect to certain broadcasts or other like transmissions containing a display of a work for instructional purposes in classrooms, for disabled persons and for government employees. Under certain circumstances, the same is true for certain public receptions of transmissions and secondary transmissions by cable television systems and public broadcasting stations.

3.2.4 Communication to the Public by Telecommunication

"Communication to the public by telecommunication" affirms the copyright owner's sole, exclusive right to authorize the use of the work on radio, television, transmission by microwave, cable, etc. In fact, definition of "telecommunications" in the Act is: *any transmission of signs, signals, writing, images or sounds or intelligence of any nature by wire, radio, visual, optical or other electromagnetic system.* It also applies to closed-circuit communications (hotels or apartment buildings having internal transmission). Rights-holders for the works involved can include film and television producers, composers of music used on radio or on television, and producers of recorded sporting events.¹³

Retransmission of copyright works on distant signals also entitles rights holders to royalties. In this case, the signal is one not available over the air, and cable companies, direct broadcast satellite operators, master antenna systems, etc. who retransmit signals must pay royalties to rights holders. The rights holders, in this case, have a compulsory license and a number of collectives exist to collect and redistribute those royalties, including the Canadian Retransmission Collective (for non-U.S. independent film and television producers), the Canadian Broadcasters Retransmission Rights Agency (for private sector Canadian broadcasters), the Canadian Copyright Collective (U.S. film producers), and the Canadian Retransmission Right Association (for the CBC/SRC, Radio-Quebec, ABC, CBS and NBC).

New media considerations

In a world where electronic distribution of works, rather than their sale or rental in the form of "hard copies", becomes more prevalent, arguably the right of communication to the public by telecommunication can become more important than the reproduction right. Where transmission on networks, via telephone lines, cable, satellite, or radio, occurs, rights-holders

¹³ Harris (1992), p.97.

of new media or multimedia works do not have a single collective or consistent mechanism to handle the right of communication via telecommunication.

3.2.5 Publication Right

The rights holder has the sole and exclusive right to authorize the first publication of an unpublished work (defined in the Act as, "*the issue of copies of the work to the public*"). According to the Act, publication does not include public delivery of a lecture, exhibition of a work of art, the public performance of a musical work (although the fixation of the work in sheet music, or on a sound recording, is "publication"), or the public performance of a dramatic work. As with "public performance", the Act does not define "public." Finally, by definition, once the work is published, this right becomes exhausted.

New media considerations

The wording of the Act is broad, and "publication" becomes essentially the act of issuing copies to the public. Should it therefore cover the issuing of copies through a network, once the work is downloaded by "the public"? If the work is not downloaded by a user of the network, has it actually been published?

3.2.6 Right to Prohibit Importation

In the case of books, a copyright holder has the right to prevent the importing of pirated copies of books into the Canadian market. The rights holder may have Canadian customs prevent the importing of these copies. Although Canadian publishers might consider it important, the right to prevent importation of otherwise legitimate "parallel copies" of books without appropriate territorial rights does not exist in Canada. This right is considered important to publishers when Canadian works are published in Canada by a Canadian publisher, and abroad by foreign publishers.¹⁴ If foreign-published copies of the book enter Canada, then the Canadian publisher is denied the revenues to which she or he is normally entitled.

New media considerations

The same kinds of publication issues that arise for physical copies of books also arise for CD-ROM versions of books; therefore, the importation of pirated CD ROMs could be halted at the Canadian border, while parallel editions of CD ROMs published outside of Canada do not fall under this copyright protection.

¹⁴ Harris (1992), p.97-98.

With the transmission of literary works on electronic networks, however, there is a potential for the rights-holder's right to prohibit importation to be eroded. Given the global nature of electronic transmission, the rights-holder would have much more difficulty defending territorially-bound rights such as this one (already, with the issue of foreign-published "split run" magazines such as Sports Illustrated, for example, Canada has faced some difficulty with the territoriality of electronically- or satellite-delivered material).

3.2.7 Adaptation Right

According to this right, the copyright holder has the right to adapt, or authorize the adaptation of, a work (e.g. adapting a play into a film screenplay). As copyright works are adapted into multimedia works, the creator of the multimedia work must obtain the original author's permission to adapt the work for the new application.

New media considerations. Given the ease of transforming digitized works, multimedia creators could take an existing work and adapt it for multimedia products, without the original creator's consent or knowledge. The question of "morphing", or digitally transforming works so that they could become quite different from the original work (and therefore difficult to trace to their source) is further discussed in section 3.3.2 below.

3.2.8 Translation Right

Only the copyright owner may translate, or authorize someone else to translate, the copyright work. This applies to translation from one language to another, not from one form to another (adaptation).

3.2.9 Authorization

According to this right, only copyright owners may authorize the use of any of the exclusive copyrights to their works. Unless specifically provided, someone who has authorization to use a copyright work cannot authorize another user to exercise the same right -- this is the exclusive right of the copyright owner.

3.3 Moral Rights

Moral rights refer to the integrity of the work. In contrast to economic rights, which entitle the copyright holder to authorize the uses of the work and to receive remuneration, the moral rights protect the author's reputation. While moral rights cannot be assigned to someone else, they can be waived by the rights holder. They apply for the same duration as

economic rights. Moral rights fall into three basic categories: paternity, integrity, and association. Each of these categories is discussed below.¹⁵

3.3.1 Right of Paternity

Users of a work must ensure that they credit the creator of the work, where reasonable under the circumstances. Included in the right of paternity are the right to claim authorship, the right to remain anonymous, and the right to use a pseudonym.

New media considerations

In terms of the right of paternity, the creator is not always guaranteed that the work will be credited to her or him. For example, in the case of cable-delivered digital music services, the user does not necessarily hear, on-air, the name of the writer of the song. In an interactive CD-ROM, the multiplicity of works included means that crediting creators becomes problematic as well. The right is always considered within the limitations of what is "reasonable under the circumstances;" the courts decide, when this is contested, on what is "reasonable."

3.3.2 Right of Integrity

Essentially, this right allows the creator to prevent the mutilation, destruction or modification of an existing work, if the artist's reputation is prejudiced. There is a certain overlap between the principle of the right of integrity in moral rights, and the right of adaptation in economic rights.

New media considerations

Given the ease with which works can be modified with digital technology, arguably, moral rights become crucial in new media, to an extent that they were not in non-digital media. "Morphing", for example, where an image can be digitally transformed to become another

¹⁵ Interestingly, the U.S. did not traditionally recognize moral rights, although they were debated in the question of "colourization" of old movies. Since 1990, the Visual Artists Rights Act has given artists in visual art a right of paternity and limited right of integrity (right to prevent intentional distortion or grossly negligent destruction) for life of creator. The U.S. "first sale rule" means that the first buyer can modify the work they have purchased, without infringing copyright.

different image, is an example of the use of digital technology in a way that could be prejudicial to a creator's moral rights.¹⁶

As well, with compression, some experts have questioned whether the compression transforms a work (especially with MPEG compression), by reducing the various characteristics of a work, thereby threatens the moral rights of the original creator. As well, as bits are decompressed and rearranged, are the decoded images subject to their own copyright?

3.3.3 Right of Association

The moral right also includes a right of association, which allows the creator to prevent the use of a work if it is associated with a product, service, cause or institution. With new media, the creator's difficulty in knowing the uses of her or his work become compounded (untraceable transmissions on networks, uses of small segments on multimedia databases, etc.), and the creator's right to protect her or his moral rights, including the right of association, become compounded as well. Indeed, many of the issues relating to reproduction rights and adaptation rights come up again with moral rights, e.g. ease of making "perfect copies", tracing of uses, etc.

3.4 Neighbouring Rights

Copyright traditionally covers rights of "authors." The Rome Convention grants protection to "users" of copyright works. Because performers, record producers and broadcasters "use" literary and other works that are copyright protected, the rights afforded to the former were considered to be "near" or "neighbouring" copyright, hence the term, "neighbouring rights." Canada is not, however, a signatory to the Rome Convention, and has not incorporated neighbouring rights in Canadian copyright law (nor has the United States).

Neighbouring rights fall into three categories: rights for performers and producers of sound recordings, rights for performers in audiovisual works, and rights for broadcasting organizations. Each of these rights is discussed below.

3.4.1 Rights for Performers and Producers of Sound Recordings

Canada is not a signatory to the Rome Convention, and rights are not currently extended to performers for their performance in a sound recording work (unless the performer

¹⁶ Even in non-digital media, though, moral rights have been an issue: witness the U.S. debate on the colourization of black and white films.

is also an author, in which case his or her work is copyright-protected for authorship, but not for the performance). Since other countries recognize neighbouring rights and are signatories to the Rome Convention, there has been some discussion in Canada about recognizing rights for sound recording performers and producers. It should be noted that producers of sound recordings in Canada have a copyright in the form of the reproduction right in their sound recordings.

New media considerations

With the advent of "pay-per-listen" (i.e. digital music supplied electronically on demand to consumers, who pay only for what they listen to), performers could lose a source of revenue that they originally derived from the sale of records. The neighbouring right could provide some "compensation" and the possibility to control public performance. As with neighbouring rights for performers in audiovisual works, the neighbouring right for sound recording performers and producers adds a new layer of rights to consider, for anyone who wants to use an existing work in a new work. For example, if the neighbouring right existed in Canada, a multimedia encyclopedia developer would have to clear reproduction and public performance rights for music through the composer, the producer, and the performer of the work to be incorporated into the multimedia work.

3.4.2 Rights to Performers in Audiovisual Works

Performers believe that their performance should be protected in the Copyright Act, as per the Rome Convention. This Convention currently states that, as with sound recordings, performers in audiovisual works have the right to prevent the broadcasting and communication to the public of their live performances, the unauthorized fixation of their unfixed (or "live") performances, and the unauthorized reproduction of their performances if the original was made without the performer's consent (Article 7). According to the Rome Convention as well (Article 19), the performer's rights are not applied if the performer has consented to the fixation of her or his performance in a film. In other words, the "first fixation" of the work is protected, but the performer cannot control subsequent uses, once the performer has consented to the first fixation.

New media considerations

Performers would become another category of rights-holders, along with writers and producers. Their independent production agreements will have to take into account new multimedia uses of works. Already, in our discussions with ACTRA, we have learned that performer's union is examining ways of incorporating multimedia rights into its next independent production agreement (the current one expires at the end of 1994). The current Union des Artistes independent production agreement includes a section on interactive media and is discussed further in chapter 4 below.

3.4.3 Rights for Broadcasting Organizations

Signal rights are a type of neighbouring right included in the Rome Convention. The Convention provides neighbouring rights to the broadcaster whose signal is both transmitted and retransmitted via Hertzian waves (i.e. over the air). Because most television viewers in Canada have cable, and receive the signal in this way, rather than via Hertzian waves, the provisions of the Rome Convention are already technologically obsolete. Canadian neighbouring rights legislation, if adopted, would therefore have to go beyond Rome, according to broadcasters, if it is to have any relevance to the current distribution system. With the advent of other distribution technologies (e.g. telecommunications), the Rome Convention provisions are likely less relevant to the Canada in the context of the Information Highway.

New media considerations

Video-on-demand is relevant to signal rights, in that signal rights, depending on their definition, could include a kind of "reselling" of a broadcaster's signal (via telecommunications). Of course, in addressing the question of video-on-demand and signal rights, it would be important to clarify whether, in fact, video-on-demand constitutes the rebroadcast of a signal, or just the transmission of a particular work (and therefore not subject to a potential signal right).

The definition of "signal" in such a right might therefore have to expand beyond Hertzian waves to encompass the transmission of signals on terrestrial electronic networks, for example. Should Canada become a signatory to the Rome Convention, Canadian copyright law might nonetheless have to recognize that the Rome Convention could be considered technologically out of date.

In addition, the Rome Convention reflects a time when broadcasting organizations did not cross state boundaries and when territorial boundaries could overlap with copyright boundaries. Currently and in the longer term, as we witness increased horizontal integration and multinational corporate mergers in the media sector, questions regarding the ownership of the neighbouring right arise.

Moreover, when signal rights are applied to content on the Information Highway, identifying users, and rights payers, can be difficult.¹⁷ In a recent case, a group of U.S. music publishers tried to sue CompuServ, a commercial network. According to the publishers, CompuServ allowed its users to upload musical compositions into areas where other users could access them. Was CompuServ, however, as a carrier, responsible for the illegal

¹⁷ In the current *Canadian Copyright Act*, (e.g. a satellite that picks up a broadcaster's signal and delivers the signal to a cable operator, who in turn delivers the signal to the household) is not liable for payments to program originators, but also is not entitled to retransmission royalties.

"publishing" of the musical works transmitted on it? One observer has argued that, because the company cannot practically exercise control over the information passing on its network, it should not have to be liable for unauthorized copying.¹⁸ The case is still before the courts.

3.5 Rental Rights

A "rental right" involves granting (economic) rights to rights-holders based on the rental (or temporary ownership) of their work. Already in Canada, a rental right has been afforded in the record industry and computer software industry, where rights-holders have, through the NAFTA Implementation Act (which constituted an amendment to the Copyright Act), the ability to authorize or prohibit the rental of their products. The Canadian record industry, through the Canadian Recording Industry Association (CRIA) and the Canadian Independent Record Production Association (CIRPA) has chosen to exercise this right negatively, by prohibiting rental of records. In fact, Canadian rental right provisions were intended to harmonize Canadian practices with American ones. The U.S. Copyright Act was amended as part of the 1990 U.S. Judicial Improvements Act, to provide that the owner of copyright has a right to authorize rental, lease or lending of a computer program for commercial purposes.

Rental rights could also be applied for rental of other works (e.g. videocassettes), books, works of art, and works stored in electronic format. Moreover, with the advent of electronic transmission, the "rental" does not necessarily have to be of a physical product, but "rental" of an electronic product (e.g. video games delivered over cable to the home).

New media considerations

With new media, both forms of rental (i.e. rental of the hard copy, and electronic rentals) are possible. Consumers could rent multimedia CD-ROMs and in fact, as of November 1993, Blockbuster Entertainment Corporation began renting and selling CD-ROM entertainment software and hardware at 52 Blockbuster Video stores and five company-owned music stores around San Francisco. Plans are to expand sale and rentals to all company-owned stores by November 1994. Blockbuster's CD-ROM categories include games, reference works, educational titles, business applications, music and movies in VideoCD format. CD software rentals being at \$4.00 (U.S.) per title for three evenings.

The rental right has traditionally been considered to address the rental of physical objects. When it was proposed ten years ago, experts believed that owners of rental establishments

¹⁸ John Perry Barlow, "The Economy of Ideas: a Framework for Rethinking Patents and Copyright", *Wires* (March, 1994), p. 86.

would somehow pay rights holders a fee for the rental of their works.¹⁹ In the case of electronic "rental", however, there is not necessarily an "owner of a rental establishment" or even a network manager who is tracking rights, uses, and copying. With the advent of video-on-demand, another kind of electronic "rental" emerges, where consumers can watch programs for which they have paid a fee. In this case, who would be responsible for paying rights from rentals: the service provider, or the "packager" of the programming (akin to a broadcaster)? In our interviews, some creators suggested the possibility of charging access fees, since access to the work transmitted electronically implies temporary ownership (or rental). This would also facilitate the tracing of users. The service provider would track uses and funnel royalties for uses to rights-holders.

On the international front, some countries believe that the electronic rental of databases, as well as rentals of actual CD-ROMs, is of growing concern. At WIPO discussions about neighbouring rights for sound recording performers and producers, in June of 1993, some intervenors noted that, "unauthorized rental could virtually supersede organized distribution in certain cases, and the opportunities thus created for unauthorized copying could seriously prejudice the legitimate interests of authors and other owners of copyright" As a result, they urged that any rental right recognized in international conventions recognize the importance of database rentals.

3.6 The Components of Intellectual Property

Intellectual property includes copyright, patent, trade mark, industrial design, confidential information and trade secrets, and integrated circuit topography protection. As discussed above, copyright applies to literary, dramatic, musical and artistic works, sound recordings and audiovisual works. Patent law covers articles, compositions, apparatuses, processes, or improvements to existing patents. Trade mark refers to works, symbols, pictures, logos, designs, or shaping of goods (or a combination of these elements) used to distinguish the goods or services of one person or organization from another. Industrial design covers the "visually appealing" parts of a design applied to a manufactured article. Confidential information and trade secrets (not a subject of statute, but based on common law) relate to concepts, ideas and factual information. Finally, integrated circuit topography protection covers electronic "chips" found in a variety of devices. In this section, we will address some specific issues concerning copyright and patent.

The term of copyright is generally 50 years after the death of the author, while patents apply for 20 years after the date of filing. There is a trade-off in copyrights versus patents: some U.S. observers note that while the copyright term is long, copyright covers only the

¹⁹ In *From Gutenberg to Telidon: a White Paper on Copyright* (Ottawa: Supply and Services Canada, 1984), p. 20.

expression of an idea, and allows other expressions of the same idea. Patent, on the other hand, is shorter, but allows the creator a virtual monopoly on the use of the creation and more control over imitations of the creation. As is the case in Canada for registered works, the unauthorized user of a patented product or process has full responsibility, criminally and civilly, in cases of infringement. Works and devices can be protected by both patent and copyright: for instance, a clothes dryer can be covered by patent, which protects the apparatus and process, while the instruction manual, as a literary work, is copyright protected.

3.6.1 Computer Software

The protection of software under copyright has been questioned internationally. Some people wonder whether, in fact, copyright is the best or even the most appropriate kind of protection for software. Critics of the application of copyright to software argue that the purpose of computer programs is to cause a computer (i.e. a machine) to achieve a task or result. This is not a "copyright" question, since it is not related to literary or artistic works. Moreover, copyright does not, according to these observers, protect algorithms, which are considered the most fundamental creative elements of computer programs. In response, some experts defend the application of copyright for software, since computer programs are essentially writings that can be "decompiled" for human-readability. With respect to algorithms, these observers feel that it is quite appropriate that copyright does not protect algorithms, as it does not protect any idea, procedure, process, method of operation, concept, principle or discovery, but only expressions of those ideas. Therefore, copyright can offer appropriate protection for computer programs without creating unreasonable obstacles to the creation of such programs.

New media have further challenged the copyright-patent distinction. One observer argues that patent law initially was not generally intended to protect printed works, and therefore, organization systems in print indexes could not be patented. Once a technique can be performed by a machine, however, patent law can apply, and therefore, "the very same method, when put in digital (and therefore into machine-executable) form may suddenly be patentable, along with such things as methods of footnoting, methods of linking parts of text together, methods of representing symbolically how one can search the text, and methods of displaying information on a computer screen" (Samuelson, 1991: 28). Therefore, the debate on the application of copyright or patent to certain aspects of new media is ongoing, and relates to the protection of products and processes, versus the protection of the expression of ideas.

The term of copyright has also been criticized, at least in its application to new media. The 50-year term, some people argue, is excessive, since software programs can become outdated in much less time. An Internet bulletin board on copyright contains an extensive discussion on the terms of copyrights and patents. Essentially, some people feel that copyright terms are so long that they can hinder competition and the creation of various components of computer

programs. One author notes, "patent rights are shorter today than copyrights because of the social utility of having more competition sooner in the production of functional items than with literary and artistic works. Copyrights also have ... a thin scope of protection so that others can develop competing works as long as they express the same ideas differently."

Also with respect to software, the question of "look and feel" (relating to the user interface) has emerged. Some people have asked whether a software developer, by copying the "look and feel" of a program (without copying the source code) thereby infringes copyright. Others, though, wonder whether protecting the user interface would preclude other software developers from developing material based on works that, through their user interface, have effectively become an industry standard.²⁰ As one author notes, "the line between ideas and expression is murky, because ... the bulk of the creative work is the conceptualization of a computer program and its user interface, rather than in its encoding ... The issues of "look and feel" and functional equivalence have not yet been considered extensively in Canada in connection with computer programs. As a general rule, it should not be an infringement of copyright to create an original computer program which can be put to the same use as a pre-existing program" (Rush, 1991: 11-12).

3.6.2 Computer Databases and the Relevance of Copyright

American observers have questioned the utility and applicability of copyright to electronic databases. Because copyright places value on the expression of ideas, and not on facts or ideas themselves, some people argue that the value of the database, which is in the facts it holds, is not adequately protected in copyright. The way information is organized in a database (e.g. the database's structuring software) is copyrighted. The threat to databases, however, is not in copying the expression, but in downloading content: *"Compiling and making accessible huge volumes of facts in a format in which the individual user can parse the material in her own way creates a valuable product. The product merits protection. A system that premises property rights solely on creative expression or inventive insight serves poorly in this milieu"* (Nimmer and Krauthaus, 1993: 19-20).

In a recent article, the same observers point out that, *"information stored in ... [computer systems] ... merits protection under law both because of the value creating capability of the systems and because of the need to build and reinforce expectations that these critically important facilities in modern life are protected from undesired intrusion and damage"* (Nimmer and Krauthaus, 1993: 34). In other words, the nature of the material in a database (information) gives the database a different kind of value than traditional copyright works,

²⁰ See Martin Glenn and Dale M. Cendali, *"Lotus Case Highlights Copyright Issues and High-Tech Problems"*. *National Law Journal*, November 1, 1993, p. S20.

and therefore, electronic databases merit a different kind of protection, predicated on ownership of the information (rather than on its expression).

3.6.3 The Use of Patent in Multimedia

A recent U.S. case highlights some of the dilemmas associated with adequately protecting new media works under patent. Executives at the U.S. company, Compton's NewMedia, believe that they first conceived the genre now known as multimedia in 1985, with respect to a multimedia encyclopedia, for which research and development had started in 1986. Prior to that time, CD-ROM products were text-based and used simple Boolean logic to handle the search function. Two Compton executives claim that they were the first to integrate graphics with text and a more complex search function for scanning interrelated databases. Compton applied for and was granted a patent on August 31, 1993, that covers any multimedia product that uses a search and retrieval mechanism. This U.S. Patent is called "multimedia search system using a plurality of entry path means which indicate interrelatedness of information." The original patent decision specifically stated that the patent was not limited to Compton's products, but that the "invention can be used with any information that can be stored in a database." Compton believes that the patent applies to most existing multimedia titles and multimedia applications. The company announced that it would allow other multimedia publishers to continue publishing their products under specific licensing and royalty plans; for instance, if the other company enters a strategic joint venture relationship with Compton, becomes an affiliated label of Compton, develops a product using the patent, or pays Compton a royalty (starting at one per cent, to be raised eventually to three per cent).

Other multimedia producers reacted angrily to the grant of patent, and a Time Warner executive was quoted in the Los Angeles Times, saying, "It's like trying to patent a watermelon." The patent was therefore challenged by titles developers and publishers, wanting the decision overturned. They argued that some titles were released before Compton's Multimedia Encyclopedia, and that, therefore, Compton was not the first to develop the process that was patented. Compton, however, recognized longer-term applications to this wide patent: beyond CD-ROM to other delivery media, along the Information Highway in education, information and entertainment. Compton's competitors feared having to pay "royalties to Compton's for virtually any commercially distributed multimedia CD-ROM or interactive television program."²¹ Notwithstanding the decision by U.S. patent authorities, the issue could recur, perhaps in Canada or with respect to other multimedia products.

²¹ "Multimedia Uproar," *One to One*, January 1994, p. 10.

3.6.4 Conclusions

Copyright has been considered by a number of observers to be an imperfect means to protect adequately computer software -- due to the long term applied in copyright and the need to protect the look and feel of a program. Moreover, certain aspects of software and databases make these applications, by their very nature, hard to copyright: ideas and information need to be protected (according to some observers), and copyright is not the appropriate mechanism to do this. On the other hand, using patent for broad multimedia applications can hinder competition and the development of a wider variety of new products. If the traditional categories of intellectual property cannot adequately protect new media creations; if existing intellectual property mechanisms cannot at the same time permit the dissemination of new products, then there could be a need for new categories of protection in new media (such as a sui generis new media right, or a specific set of rights for new media).

3.7 Case Studies

We have developed a number of case studies which highlight the copyright issues discussed above. The cases address various new media applications, including digital music, electronic publishing, and electronic databases. As we will see, there can be development in new media, within the existing copyright framework, but that development can be fraught with administrative and practical barriers and considerations.

3.7.1 Composers Riding the Digital Wave

The distribution system for sound recordings is fast approaching the day when it fully embraces digital technology. Digital Audio Broadcasting (DAB) or Digital Audio Radio (DAR) offers the advantages of transmitting high quality digital sound without the problems of transmission interferences, limited geographic reach, or the high power demands, typically associated with existing technology.

Digital audio can be broadcast from terrestrial towers, satellites or through cable wired to the home. A few cable systems in the U.S., i.e. Digital Cable Radio, Digital Planet and Digital Music Express, already offer as many as 50 channels of commercial free, digital sound, in different parts of the country for a relatively small monthly user fee. Subscribers can "tune into" anything from hard rock to contemporary to classical music.

In Canada, Shaw and Cogeco submitted applications for such services in 1993. The proposed systems would deliver signals by co-axial cable. On a similar note, one broadcaster has recently acquired the Canadian rights to an innovative new microwave distribution technology capable of transmitting existing television, telephone and radio services, as well as large amounts of data in a new "cableless" process similar to cellular phone technology.

Regardless of how programming is delivered, questions arise with respect to services such as those proposed by Shaw and Cogeco. In particular, will these new delivery systems increase or decrease the income of composers, lyricists, songwriters and their publishers? In addition, how will these signals be carried? Given the ease of copying and the superior sound quality, will consumers simply make their own "records" and engage in widespread home taping? At a recent conference on copyright collectives, the Executive Director of the Quebec record producers' association (ADISQ) Robert Pilon noted that, as digital cable music services are developed in Canada, music consumers might become less interested in purchasing "hard copies" of music (i.e. records or CDs), since the music is easily taped and is played constantly. With the potential erosion of record sales due to the replacement of records and CDs with electronically-transmitted music, the *raison d'être* of reproduction rights and collectives for reproduction royalties (which are based on the reproduction of physical copies or "mechanical contrivances") is called into question. Arguably, public performance rights and telecommunication rights become more important than reproduction rights, as electronic product replaces physical product (i.e. records). Rights holders will have to ensure that remuneration schemes compensate them for this new use of their works (e.g. a home taping levy, to ensure that reproductions made from electronically-delivered music still generate some revenue for rights-holders).

3.7.2 Educational Use of Electronic Information

The publishing industry is on the brink of explosive growth in the use of digital technology to deliver documents electronically. Yet, we are only beginning to understand what lessons of print apply to electronic media.

In a first Canadian example, the bookstore at McMaster University in Hamilton is offering students a type of "textbook on demand" service, through its "Custom Courseware Division", which began in July, 1993. Professors provide the bookstore with hard copies of articles, books out of print, or chapters from books, which can be compiled for students into a course package. The "hard copies" are scanned into the bookstore's optical disk and printed as requested. The bookstore ensures rights clearances through CanCopy, for Canadian works on the CanCopy repertoire. CanCopy allows the bookstore to use up to 15% of an existing book, articles, etc. on its repertoire (most of the Canadian works used are on the CanCopy repertoire). CanCopy also provides the bookstore with an "exclusion list" of works and publishers who are not CanCopy members. If a professor wants to include one of these works in the course package, then the bookstore must clear the rights with the individual publisher. Also, if the professor wants to use more than 15% of a book, then, again, the bookstore must negotiate with the individual publisher. For works published in the U.S., the bookstore also contacts publishers directly and negotiates licenses to produce copies.

One of the objectives of the Custom Courseware Division was to prevent students' making unauthorized copies of course readings. The prices of these course packages compare favourably to photocopying: CanCopy charges the bookstore four cents per copyright page (CanCopy also handles redistribution of the money to member rights-holders). This price is

passed onto the purchaser, plus another four cents per page for printing, and the bookstore's markup of two cents per page (making a total of ten cents per page, comparable to the price of a photocopy). A "high end" course package can cost up to \$25. These course packages usually supplement, however, textbooks, and students still have to purchase conventional textbooks.

In the future, depending on customer demand, the bookstore might be able to provide diskette copies of course packages, or allow students to call the material up on the university network and receive the material electronically. Already, some professors send texts for inclusion in course packages, over the university network.

Generally, according to the McMaster bookstore, the results have been extremely positive. Rights clearances through CanCopy have been rapid and relatively painless for the bookstore, although rights clearances with publishers can be more problematic (publishers generally ask for at least the double of what CanCopy charges, and when the work becomes too expensive, then the professor might not choose to include it in the course package). Clearing rights for published music is currently done through individual publishers, although the bookstore hopes to be able to clear such rights through the appropriate collective.

This example represents a first stage in creating textbooks on demand: "hard copies" are still used, for scanning purposes and are still sold to students. Nonetheless, this is an instructive example of the negotiating near-new media rights through existing collectives.

3.7.3 The MEDIALOG example: clearing rights for experimental uses

In Canada, the lawyer involved with MEDIALOG, Zenaïde Lussier, has pointed to the MEDIALOG "electronic library" as an example of an application of successful resolution of copyright issues in the multimedia context. MEDIALOG was a multimedia catalogue of digitized collections, which allowed users to search terms, texts, or hyperlinks. It also allowed users to reproduce documents. In its first stages of experimentation, MEDIALOG involved partners such as the Montreal fine arts museum and the Cinémathèque québécoise, which had extensive collections amenable to databases. The theme of MEDIALOG's first prototype was Montreal, and the multimedia project allowed users to do a guided tour of Montreal and of the museum. The technical aspects of the multimedia work allowed tracking of uses and redistribution of royalties to creators.²²

In a second prototype, MEDIALOG offered a multimedia database on the Saint Lawrence river. The database incorporated photos, videos derived from Radio-Canada programs,

²² Zenaïde Lussier, "Le droit d'auteur: un ennemi des banques de données multimédias?" (paper presented at Multimedia Communications '93, April 1993), p. 433.

interviews and text. In total, rights to works belonging to 16 rights-holders were negotiated for a one-year period, and the negotiations took about two months to complete. The uses negotiated were strictly for a demonstration of a pilot project, and creators waived their moral rights. MEDIALOG was able to work with collectives to negotiate these rights. The database itself contains a field that identifies rights-holders, thereby tracking the uses of each rights-holder's work, and users pay for reproductions (printing of copies derived from the database). MEDIALOG was able to develop breakdowns of costs for reproductions, allocations of rights, etc.

While this example worked for limited experimental use, users had to go to the site of the database to use it. Therefore, access was controlled and monitored using existing technologies. Had such a database been accessible on a network, with numerous users simultaneously accessing it, that the rights issues could have been more complicated.

Lussier also mentions the French VIDEOMUSEUM multimedia database. VIDEOMUSEUM includes about half of France's museums, which each have a CD-ROM copy of the database, and describes various works of art from the twentieth century in France. Lussier points to the success of the creators of the database in negotiating agreements with two French visual arts collectives. The royalties that are paid per work go to the collectives, although the number of copies made and the number of CD-ROMs in circulation does not enter into the royalty formula.²³

3.8 Conclusions

The Canadian copyright framework is the traditional means for protecting creations: literary, artistic, musical, dramatic, audiovisual, etc. In Exhibit 3-3, we summarize the types of works covered under copyright, and consider the actual rights, terms and exceptions that apply to each type of work. It would appear on the one hand that copyright is a complex, onerous framework for protection of works and remuneration for creators. On the other hand, as the case studies show, the framework can be flexible enough to allow a certain level of new media development, for creators, producers and users who are willing and able to work through negotiations, collectives and contracts. In the following chapter, we will address practical copyright issues for various stakeholders, and consider the ways in which the practical issues have been addressed.

²³ Lussier (1993), p.432.

EXHIBIT 3-3
A SUMMARY OF COPYRIGHT BY TYPE OF WORK

TYPE OF WORK							
	LITERARY	DRAMATIC	MUSICAL	SOUND RECORDINGS/MECHANICAL CONTRIVANCES	ARTISTIC	AUDIO-VISUAL	JOINT AUTHORSHIP, COMPILATION, OR COLLECTIVE
COLLECTIVES	CanCopy UNEQ	Playwrights Union of Canada Société des auteurs et compositeurs dramatiques	SOCAN (for public performance)	Audio Video Licensing Agency (for reproduction), ADISQ CMRRA (reproduction-in music) SODRAC (reproduction-in music)	Vis*ART CARFAC	CRC, CBRA, CRRA - for retransmission AVLA, ADISQ - for reproduction	• depends on type of work
RIGHTS	<ul style="list-style-type: none"> • economic and moral rights except exhibition • rental right for software 	<ul style="list-style-type: none"> • economic and moral rights except exhibition and reproduction 	<ul style="list-style-type: none"> • economic and moral rights except exhibition and translation 	<ul style="list-style-type: none"> • economic and moral rights except public performance, exhibition, communication by telecommunication and translation • rental right for sound recordings 	<ul style="list-style-type: none"> • economic and moral rights except public performance, communication by telecommunication and translation • has an exhibition right, which other types of work do not • casts and molds of sculpture are copyrighted 	<ul style="list-style-type: none"> • economic and moral rights 	• depends on type of work
EXCEPTIONS	<ul style="list-style-type: none"> • editions are not copyrighted • publication of short passages in collections intended for schools is not an infringement • publication in a newspaper of a lecture delivered in public is not an infringement unless specifically prohibited • backup copies of software are not infringements 		<ul style="list-style-type: none"> • performance without motive of gain at agricultural fairs is not an infringement • public performance in furtherance of religious educational or chair role objectives is not an infringement 	<ul style="list-style-type: none"> • making of copies for archival purposes is not an infringement 	<ul style="list-style-type: none"> • drawings, photos engravings or paintings of works in public places do not infringe copyright 		
TERM	50 years after death of author	50 years after death of author	50 years after death of author	50 years after making of original plate	50 years after death of author Photos & engravings: 50 years after negative or plate made	50 years after author's death (if protected as dramatic works) 50 years after original plate or negative made (if protected as photos or mechanical contrivances)	depends on copyright in each work within collective works: 50 years after death of compiler, or 50 years after death of last surviving author (for joint works)

4.0 COPYRIGHT IN PRACTICE: THE STAKEHOLDERS' POINTS OF VIEW

In this section, we address some additional copyright questions from the points of view of creators of works used in new media, producers of new works, and users of new media. We also look at specific ways in which rights holders and users have addressed the practical problems of copyright in a new media environment.

4.1 Developing a Multimedia Work

From the point of view of the producer, the development of a new work can be the product of incorporating existing works into a new work, modifying those existing works, and/or adding new works. As such, existing works can be an integral part of the new multimedia work.

In non-digital media, copying often occurs for the user's immediate economic benefit. In digital media, however, copying does not necessarily occur for the producer's immediate economic benefit. Jonathan Katsch observes that,

...the dilemma for copyright law in the electronic era arises not only because increased copying occurs, but also because copying becomes a more obvious, accepted, fundamental, and even legitimate part of the creative process. The electronic media are fostering a proliferation of new creative forms, some of which require, encourage or facilitate copying ... The copying of electronic information ... allows it to be processed, manipulated, and put to use in ways not possible with print. Copying, therefore, is often not an end in itself, not an act of piracy done solely to make a profit from someone else's work, but part of a larger process in which new tools can be applied to data in new ways....²⁴

Below, we examine a number of copyright issues and distinguish between those affecting multimedia creators and those affecting creators whose works are used in new multimedia works. In Exhibits 4-1, 4-2 and 4-3, we summarize the copyright issues faced by creators, users and distributors.

4.1.1 The Multitude of Works and Rights that have to be Cleared for Copyright

The production of multimedia works involves the use of clips from pre-existing works, whether they be a 30-second video clip of a film, a photograph, or a 15-second clip of a sound recording. Each and every pre-existing work, which is copyright protected, must be

²⁴ Pierre Trudel and Sylvie Latour, "Aperçu des principaux mécanismes de gestion collective des droits d'auteur" (paper presented at ALAI Conference, "La Gestion collective du droit d'auteur", March 1994), p. 55.

cleared for use in a new work. Given that multimedia can incorporate a multitude of pre-existing works, there will also be a multitude of rights to clear for copyright.

Should the administrative and economic burden of copyright clearance become too onerous, then the multimedia creator has an incentive to create or commission new works, which themselves will be "copyrightable." As a result, the number of works in existence grows exponentially, while exposure to existing works is reduced accordingly.

Multimedia creators point out that, when they try to negotiate rights for the use of existing works, the rights-holders demand very high prices for the works. As one source puts it, because many of the entertainment guilds and licensing organizations are unfamiliar with the multimedia market, there is a tendency for them to price licenses for multimedia works the same way they traditionally price similar licenses for the entertainment industry. Usually this puts these pre-existing works out of the price range multimedia producers can afford²⁶.

From the creator's perspective, though, the multitude of possible uses of an existing work can be unclear. It is not in the creator's interest to "sign away" rights to a work so that it may be used in any variety of new technologies, both already-existing and to be developed -- unless the uses are clearly stipulated in the contract with the multimedia producer, and their value makes sense. It is not in the creator's interest to complicate unduly the ways in which they are remunerated for the use of their work.

Exhibit 4-1
Copyright Issues for Multimedia Producers and Creators of Existing Works

Existing Rights	Major Issues include:
Reproduction	<ul style="list-style-type: none"> ◦ measuring a "substantial portion" of a non-linear work and attaching a monetary value to it ◦ knowing under what circumstances reproductions are authorized (e.g. fair dealing) ◦ tracking unauthorized reproductions
Public Performance/Exhibition	<ul style="list-style-type: none"> ◦ defining "public": is a computer screen display in a public place, a "public performance"?
Communication to the public by telecommunications	<ul style="list-style-type: none"> ◦ ability to track unauthorized transmission
<u>Moral</u> Paternity Integrity Association	<ul style="list-style-type: none"> ◦ ensuring that the work is credited to the creator, where reasonable under the circumstances ◦ tracing unauthorized transformations to a work ◦ flexibility in negotiating between creators and producers ◦ tracing association of a work
Potential Rights	
Neighbouring	<ul style="list-style-type: none"> ◦ ensuring adequate remuneration scheme for multimedia performers/performances
Rental	<ul style="list-style-type: none"> ◦ will the electronic rental market threaten sale of "hard copies" and/or facilitate home taping?

Exhibit 4-2
Copyright Issues for Distributors

Existing Rights	Major Issues include:
Reproduction	<ul style="list-style-type: none"> ◦ creating mechanisms to allow "browsing" for free, but copying (e.g. downloading) would not be; creating a "display" right ◦ working with creators and users to develop mechanisms that protect works (encryption, etc.) ◦ creating mechanisms to channel royalties to creators from users ◦ ensuring that liabilities for unauthorized transmission are clearly defined
Communication to the public by telecommunication	<ul style="list-style-type: none"> ◦ distinguishing between carriage and distribution
Potential Rights	
Neighbouring	<ul style="list-style-type: none"> ◦ ensuring that the definition of "broadcast signal" goes beyond Hertzian waves ◦ broadcaster could become a universal distributor
Rental	<ul style="list-style-type: none"> ◦ with "electronic rentals", distributor becomes more important in use tracking, distribution of revenues to rights holders

Exhibit 4-3
Copyright Issues for New Media Users
(Consumers, Academics, Business, Users of existing Works)

Existing Rights	Major Issues include:
Reproduction	<ul style="list-style-type: none"> ◦ negotiating with creators for use of substantial portions of existing works ◦ identifying rights-holders ◦ knowing under what circumstances reproductions are authorized (e.g. fair dealing) ◦ system is transparent with regard to payments ◦ system sufficiently controlled to make use of unauthorized reproductions unattractive
Public Performance	<ul style="list-style-type: none"> ◦ defining "public": is a computer screen display in a public place a "public performance"?
Communication to the public by telecommunication	<ul style="list-style-type: none"> ◦ knowing what transmissions are authorized or unauthorized
Moral	
Paternity	<ul style="list-style-type: none"> ◦ crediting creators, without hindering use (e.g. digital cable-delivered music) ◦ finding simple, transparent mechanisms of tracking creators
Integrity	<ul style="list-style-type: none"> ◦ flexibility: can the paternity right be ensured without the integrity right?
Potential Rights	
Neighbouring	<ul style="list-style-type: none"> ◦ new category of rights holders (performers): will rights clearances and payments become more onerous?
Rental	<ul style="list-style-type: none"> ◦ ensuring that rental remains affordable and accessible, while rights holders are protected

4.1.2 Clearing Different Copyright Works and Rights

Copyrightable works which are combined into a multimedia work -- books, computer software, photographs, film and music -- arise in separate industries. These industries have developed their own legal customs and traditional license terms. Even within a single work (e.g. a film), there may be a number of copyrighted works (music, screenplay, and the entire film), and by clearing rights to the film, the multimedia creator does not necessarily gain rights to the music within the film, for example. Obtaining rights in existing works might simply involve a per use license from a copyright collective (e.g. SOCAN), or it might involve negotiation with a specific party (e.g. the music performers). Moreover, certain industries involved in multimedia production (e.g. the film industry) have more experience in clearing rights to a multitude of works than others (e.g. book publishers). Multimedia works typically require the producer to obtain rights beyond those traditionally granted in these industries.

At the same time, given convergence in new media, experts in intellectual property are coming to realize the advantages to harmonization. At WIPO discussions on neighbouring rights in July, 1993, one intervenor noted that, one should keep an open mind and avoid the temptation of finding pigeon-holes for each medium or category of works and rights. This would run counter to trends imposed by digital technology, which would lead to a convergence of works, media and rights ... the underlying paradigm had always been the progressive assimilation of all forms of intellectual creation [in copyright].

4.1.3 Costs of Copyright Clearance

The costs of licensing copyrighted works are becoming an increasingly visible issue in the production of new media. Differences in the legal customs and license terms of traditional copyright industries are making it increasingly tedious to obtain the necessary legal rights. As a result, the transaction costs of obtaining some of these rights could be prohibitive. For example, the producer of a multimedia work may find it less expensive to have music specifically written and recorded for the project, rather than trying to determine what rights are needed for existing musical works and, then, negotiating to obtain such rights from different parties.

If content cannot be created from "scratch", then the next best thing is to use public domain material, reworking it so that, in its new form, it becomes the intellectual property of the producer. The producer can then sell the rights to the newly created work in different ways. In the U.S., some producers of CD ROMs are "stockpiling" databases of images and text, obtaining multimedia rights from publishers in advance, so that rights clearances in the future

become less onerous, at least for these works. Microsoft has attempted to license entire libraries of photographs, including images of entire museum collections.²⁵

However, producers should caution against using public domain material. While a piece of music, itself, for example, is available for use, a particular performance of that piece of music may not be. Unless one makes their own recording of a public domain song, they will still be required to clear rights and pay royalties to the sound recording producer.

4.1.4 Moral Rights

Multimedia producers must ensure that they obtain an appropriate waiver of moral rights in the multimedia works which they create. Multimedia producers must also guard that the creation of their work will not violate the moral rights in one of the pre-existing works included in their work.

It has been suggested in the course of our interviews that, rather than having a waiver of all moral rights, the multimedia producer could try to have some moral rights waived, but not others. For example, the multimedia producer could try to negotiate the waiver of the "integrity" aspect of the moral right, while trying to retain the right of "paternity". From this perspective, multimedia producers would see advantages to more flexibility in moral rights: some sort of compromise between the total waiver of all moral rights and the non-waiver of any moral rights.

4.1.5 Neighbouring Rights

While Canadian copyright law does not currently recognize rights for producers of sound recordings (apart from reproduction rights) or for sound recording and audiovisual performers, such a right would add another layer of rights clearances for the multimedia producer. Performers' unions or guilds would likely serve as centres for neighbouring rights clearances, in the absence of performers' copyright collectives. For performers, particularly in sound recordings, digital sampling makes identification of an unauthorized reproduction very difficult. More specifically, how is a performer to identify that her or his performance has been incorporated, without authorization, into a new media work (particularly if the musical performance has been modified through sampling), and claim royalties owing?

²⁵ Meg Cox, "In Making CD ROMs, Technology Proves Easy Compared With Rights Negotiations." *The Wall Street Journal*, June 28, 1993.

4.1.6 Signing Contracts as Commissioned Creators or as Employees

As indicated above, except in limited circumstances, the individual author of a work is generally the first owner of the copyright. An exception to this rule is when the employer is the author of a work created by an employee within the scope of his employment. Thus, an employee working for a company creating a multimedia work would not be the author of the work he has created; the company would automatically be the author. To avoid uncertainty about the scope of this doctrine, however, many companies obtain express assignments of copyright from their employees of any works the employee develops on company time or using company materials.

4.2 The Protection and Exploitation of a Multimedia Work

In this section, we discuss the issues relating to the actual use of the multimedia work, and the protection it is afforded, as opposed to the initial development of the multimedia work.

4.2.1 The Protection of a Multimedia Work Under Current Canadian Copyright Law

Current copyright policy can cover multimedia work based on the types of works incorporated into the work (i.e. if a multimedia work incorporates text, art, and music, it could be considered a literary work, an artistic work, a musical composition, and a mechanical contrivance). As we have seen in chapter 3, however, the types of works each have different rights, exceptions to those rights, and copyright terms.

According to the Copyright Office, relatively few multimedia producers register their work with the Office. Those who do must register the work according to all of the types of work incorporated into the multimedia work (e.g. literary, artistic, dramatic, mechanical contrivance, etc.).

Certain kinds of creators (e.g. authors of scholarly publications, researchers) argue that the copyright issues they face are considerably different from copyright issues faced by artists and people whose main source of revenue lies in the creation of copyright works. For researchers, citations of their works are crucial to advancing research and establishing a reputation: their concern is that users be able to access, as freely as possible, their works, while remuneration for copying or downloading is less crucial. As a result, these authors argue for a more liberal interpretation of "fair dealing" to allow, for example, widespread, free downloading of their articles from a network, and distribution of those articles to a larger educational audience -- provided the works are attributed to the author. In a sense, these authors prefer the "fair use" provisions of the U.S., and are prepared to trade remuneration for accessibility to their works.

Other rights holders (e.g. book publishers) would stress that there should be no extension to these copyright exemptions. In the example above, publishers are denied a potential revenue stream and have considerably less interest in broadening "fair dealing."

4.2.2 Barriers to Multimedia Development

Some multimedia producers have argued that, while it is difficult for them to "police" the uses made of their works (i.e. unauthorized uses and unauthorized reproductions), the real barrier to more multimedia development is the time and effort involved in clearing rights to use existing works.

4.2.3 "Communication" of the Multimedia Product

With the communication of new media on the information highway, creators will want to be assured that they are remunerated for all uses -- either before the work is transmitted (having producers pay for rights), or after (having users pay, through network access fees or "smart cards"). Alternatively, works may be transmitted for ephemeral use, as "shareware" (i.e. the work would be distributed free to the user, but users would be invited to make a voluntary payment to the creator, as with many computer software programs), with interested users communicating with the creator for their own copy of the work. The "shareware" model (discussed in further detail below) has been suggested by several interviewees as interesting for the user, who has a chance to "preview" material, and for the creator, who can still have some control over the circulation of the final product.

4.2.4 Copyright and Privacy

With the use of technology to track uses of works on the information highway, however, arise issues of privacy. The very technological solutions that may be found to monitor access, storage and use of works for the purposes of royalty clearance, collection and payment, are the technologies that imply access to personal information and even more complete personal data files. As such, users are faced with a possible loss of privacy regarding the kind of personal information that is being collected, stored, disclosed and sold on the information highway. Technology-based encoding and security mechanisms could guarantee user anonymity and protection of personal data.

In general terms, understanding of both privacy and copyright issues is important for the public and organizations. Government-led awareness campaigns (with the participation of rights-holders' organizations) intended for the public and rights-holders could become a central component of the Information Highway "information policy".

4.3 How Creators, Software Developers, Users and Producers are Addressing New Media Copyright Issues

Multimedia producers who are using works made by members of a copyright collective can negotiate for use, through the collective, of that work. As demonstrated in the MEDIALOG example, it is possible (though time-consuming) in certain circumstances to obtain rights for limited multimedia uses. In the absence of copyright collectives, producers and creators can negotiate through collective agreements or individual contracts. Finally, rights-holders are examining technological solutions to the tracking of users, unauthorized copying, and the tracking of rights-holders.

4.3.1 Collective Agreements

In Canada, a number of guilds or unions are addressing the new media uses of their members' work. Authors who are members of unions or guilds are often governed, in the first instance, by collective agreements (unless they agree to work for a producer outside the agreement). Their work is copyrighted, and they negotiate their agreements in the knowledge that they have this protection. Performers do not have a copyright, but are able to negotiate fees for the use of their performances through collective agreements (although their legal basis for negotiation is different). In the United States, certain guilds have also included new media clauses in standard collective agreements.

In Canada, the Union des Artistes (UdA) Independent Production Agreement contains a two-page appendix that covers uses of performers' performances in interactive technology. This text replaces the notion of the duration of a program by the total duration of all the parts of a performer's performance that are in the work, stating that: ... *la 'durée de l'émission' est remplacée comme critère de fixation du tarif par le minutage total apparaissant au scénario ou, dans les cas où ce serait différent, par le minutage total obtenu en faisant la somme en temps réel des troncs communs et des différents segments pour une même émission.* This appendix was developed in response to Vidéotron's Videoway interactive technology.

The Writer's Guild of Canada's Independent Production Agreement includes an appendix that covers multimedia. In the appendix concluded July 1993, this "option for corporate production: sponsored, industrial or short films" covers *"the distribution of Literary Material written under this agreement by any electronic, optical, or mechanical means including, but not limited to the following: Satellite; Free TV; Pay TV; Cable TV; Fibre Optics; Radio or any other technology"* (p. 70). The agreement covers corporate production, that is, *"the delivery of visual, audio, graphic and text based information by film, videotape, audio tape, animation, graphics, photographs, print, interactive video disk, CD-ROM, slide tape, computers, chips and any other existing or new technologies."* In contrast to the Union des Artistes appendix, the Writer's Guild agreement addresses all media and aims to be technology-neutral (addressing existing or new technologies).

In the U.S., the Screen Actors Guild has a very brief "Standard Interactive Media Agreement" which covers "the production of audio-visual material for interactive use ... which may be played on home-type television or computer screens." This agreement somewhat resembles that of the Union des Artistes, but explicitly covers computer screens. The American Federation of Television and Radio Artists (AFTRA) currently has an agreement with producers of interactive media which is even more detailed. The agreement defines "interactive media" as any media on which interactive product operates and through which the user may interact with such product, including but not limited to personal computers, games, machines, arcade games, all CD-interactive machines and any and all analogous, similar or dissimilar microprocessor-based units and the digitized, electronic or any other formats now known or later invented which may be utilized in connection therewith. The agreement specifically excludes over-the-air network television, syndicated television, cable channels and radio.

The producer may use the performance in all interactive media; upon payment of additional compensation, the producer may also have rights to use the performance via remote delivery (any system through which interactive product operates, allowing accessing of the product from a location remote from the CPU on which the product is principally used/stored) and/or integration (including any material that contains the performer's performance in other interactive media products for which the performer was not employed). If the producer wants to use a performance done in a "linear" work, the producer must negotiate with each performer whose work is going to be used. In case of violation of these provisions, the performer is entitled to damages, which are three times the amount initially paid for days worked plus fees for the medium in which the work is exploited.

The attempt is obviously to create a "technology-neutral" clause (witness references to existing technology and technology that will be "later invented"). Since performers do not currently have copyrights in Canada or the U.S., the definition of works covered under the collective agreement becomes all the more crucial for performers.

4.3.2 Contracts

Apart from collective negotiations, users and creators can negotiate individual contracts for new media uses of a work. One interesting example of such a contract is the clause governing multimedia and electronic rights acquisition, which interested publishers can

incorporate into their standard publisher/author contract. Developed by the Association of Canadian Publishers (ACP), the clause grants a publisher "multimedia rights", namely the rights:

"a) to store, retrieve, display, perform, communicate, distribute and market the verbatim text of the Work:

- in whole or in part ...
- by any electronic, digital, or analogous means now or hereafter known ... and
- accompanied or not by and interpolated or not with additional text, graphics, audio or audio-visual elements or works ... and

b) to reproduce and otherwise use and exploit, by any means now or hereafter known, the results and products of the exercise of the above rights; provided that 'multimedia rights' shall exclude hard-copy printing rights other than the right of each consumer to print a single copy of the Work duly retrieved via a multimedia device or service.

The Author hereby makes all waivers necessary to permit exercises of multimedia rights under this Agreement in association with other works, goods, services, products or institutions...."
(ACP, April 1994)

Creators still need to be able to know how their work will be used, and whether, in making all waivers necessary to permit exercises of multimedia rights, they are still able to ensure a fair contract and a fair price for all the possible uses of their work.

4.3.3 Technology

Technology has allowed new media to emerge; it can also be used to resolve some of the copyright issues related to new media. More specifically, it can be used for preventing unauthorized reproductions, for tracking uses (or "hits"), and track payments due to rights-holders.

Technology is already used to prevent unauthorized reproductions or unauthorized reception of material. In the United States and Japan, the Serial Copy Management System is used to prevent digital serial copying (generally of musical works). It does not prevent the making of a first copy from a digital work, but it prevents the making of second generation digital copies or makes very poor-quality second generation copies. This technology does not, however, prevent copying onto analogue formats. Encryption devices for television broadcasting currently exist in Canada and require users to obtain decoders in order to be able to receive encrypted pay television programs. "Fingerprinting" technologies can allow

encoding of programming and the tracing of uses, while preventing widespread copying or unauthorized rebroadcast of works. Such technology could become a means of permitting direct negotiations between creators and users (thereby bypassing collectives and compulsory licensing), and dealing with multimedia sampling. The costs, however, must be considered: one encoding technology could cost Canadian broadcasters about \$100 per hour of programming.

In terms of works used on CD-ROM servers or transmitted on a larger network, Canadian software companies have already developed software that can count "hits" (i.e. the number of users, the length of use, and the downloading of material from the CD-ROM). Some software developers suggest that the question of remunerating users is not technologically difficult, given the ability of software programs to track uses; the problem becomes the regime for administering copyright. Softwords Research International, a Victoria-based software development company currently involved in developing educational software in collaboration with Nelson Canada and the B.C. Educational Technology Centre, has already incorporated a tracking mechanism for school users of a CD-ROM Pacific Rim "atlas." The difficulty is determining how to remunerate creators whose work has been incorporated in the CD-ROM: a province-wide blanket license, a "pay-per-hit", or a "pay-per-school" mechanism? Ultimately, the copyright issue in this case becomes negotiation between rights-holders and potential users (the Ministry of Education, on behalf of all users) to set a fair price for the use of the works.

Finally, the federal government's Canadian Institute for Scientific and Technical Information (CISTI) has addressed rights clearances within its databases. Users who log onto the various CISTI scientific and technical databases (the CISTI collections are among the largest in Canada), they may also order documents. An on-screen menu provides a selection of delivery services (e.g. e-mail, facsimile, mailed hard copy, etc.), the cost of the document reproduction, and the copyright clearance fee, which averages 60 cents per page. CISTI administrators ensure that they receive copyright clearance from the publishers whose works are included in the CISTI repertoire, and apparently, CISTI users even ask for copyright-cleared documents, thus attesting to the awareness, among certain users, of copyright issues.

4.3.4 Rights Databases and Registries

Already, the music industry in English Canada has developed a database of artists, composers, format, certification, etc. for sound recordings. The Canadian Music Industry database, created under the auspices of the Canadian Independent Record Production Association, can handle outside requests, and covers works created after 1988. Producers of new multimedia works who are interested in using already-existing Canadian music can therefore find out who holds rights to that music, although the producer must still go about clearing those rights.

In the United States, the "Songdex" database was developed by a private company as a "clearing house" of music rights. Users can call the company, which will track composers, performers, cover versions of songs, the cost of licensing the work (if it has been licensed recently and the information is available), and the agent who represents the rights-holders. The company will also clear rights and negotiate with rights-holders, for a fee. Plans are underway to extend the database beyond musical works, to service multimedia producers.

Canada's CulTech Collaborative Research Centre has taken rights tracking even further. In collaboration with the Canadian Centre for Information Technologies Innovation and SOCAN, CulTech has developed what its Executive Director calls *a generalized intellectual property engine that will account for content usage to owners, generate invoices to users, and make payments to owners according to any combination of economic models*²⁶ Software used in this model has three functions: authorization (i.e. ensuring that only authorized users may access works on a multimedia database), authentication (i.e. security measures to prevent tampering), and accounting (i.e. tracking uses, billing users, and paying rights holders).

Finally, Interactive Multimedia, a U.S. association promoting the development of multimedia, is working on its own database of collectives and similar organizations in the U.S. (e.g. ASCAP, Writer's Guild, SAG, etc.). The database is intended to help multimedia producers make more sense of rights clearances and the places rights can be cleared.

4.3.5 Other Models for Commercial Use

Industry experts have pointed to other ways in which copyright can be accommodated through industry practices. One practice is the "shareware" model, where (as with computer shareware), users could "browse" material they are interested in acquiring. Copies of portions of works could be available for no charge on a network (for example, users could test-play a video game up to a certain level of difficulty). Users who are interested in acquiring the entire work (for example, the entire video game, with higher levels of difficulty) would either acquire hard copies of the work, or electronically order legal copies of the work from a creator or a distributor. While shareware does not necessarily work for software creators in the current context, since software users are given the option of paying for the software (i.e. moral sasine, rather than economic obligation), the shareware model could be useful in controlling first generation copying. In other words, it could allow creators to sell some copies of their works, while it would not by itself prevent users from making unauthorized copies, unless it were combined with some kind of Serial Copy Management System.

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Paul Hoffert, "Intellectual Property Accounting on the Information Highway" (paper presented at Insight Conference, April 26, 1994), p. 2.

Also derived from practices in the software industry is the multi-generation software model. Currently, popular software programs are revised and improved periodically -- for example, basic word processing packages such as MS Word or WordPerfect. Users who want to have up-to-date software therefore purchase software upgrades, and the manuals and documentation to accompany the upgraded software. Similarly, new media works on the information highway could go through several "generations" of development, thereby ensuring that at least some users will pay for up-to-date, authorized copies, and creators will receive some remuneration for their efforts.

The "self-destructing" model adopted by video games companies provides a third example of a commercial practice that can ensure that users are unable to make unauthorized copies. Consumers equipped with a decoder box can "order" video games via their cable company. They have one minute to download the game using a main menu. The game is played to the end and then disappears (or "self-destructs"). Moreover, new games available in this way can be limited only to the first few levels of difficulty, and consumers who want to play more sophisticated versions of the same game would have to purchase the game.

4.4 Conclusions

Creators and producers point often to the difficulty inherent in clearing rights, tracking uses, and paying for uses, in non-digital media. With new media, these practical problems associated with copyright become exacerbated. In fact, creators, distributors, producers and user representatives refer more often to problems in clearing rights and payments (i.e. issues related to the administration of copyright) than to the rights and the statute itself.

Despite the difficulties they have encountered, these groups are adapting their practices as new media are being adopted. Practices developed before the advent of digital media, such as negotiation through individual contract, collective negotiation, rights registries, etc., are coming to incorporate new media, while other, newer mechanisms, such as technology to perform "intellectual property accounting", are being developed and gradually implemented.

5.0 POLICY CONSIDERATIONS AND OPTIONS

In this section, we tie together the issues relating to copyright legislation and those relating to copyright administration. Due to the scope of the study and because it is early in the policy development process, it is not our intention to make definitive policy recommendations, nor present an optimal approach. Thus, we outline for description purposes four approaches to harmonize Canada's copyright framework with the particular circumstances around new media and the Information Highway.

Finally, we place the copyright issue in the context of the current deliberations about policies affecting the Information Highway.

5.1 Adequacy of Current Policy

We return to the questions that framed this study to consider the adequacy of existing copyright policy and mechanisms, and the need for new mechanisms. This is not a systematic review, and some of the specific questions are addressed in the first four sections. However, the following outlines some preliminary observations as a result of our research and interviews with stakeholders.

5.1.1 Changes to Existing Copyright Policy

The existing mechanisms that allow authors and users to negotiate uses and royalties were considered administratively onerous by stakeholders. However, they are preferable to specific statutory provisions that would, for example, list royalty rates, establish firm procedures for clearance, or impose new compulsory licenses.

Certain points of the existing policy could, be addressed, such as "fair dealing" and the question of "substantial portion". Should these terms be defined in the Act, so that users can know under what circumstances they need to seek authorization for uses, especially when they want to use very small portions of existing works?

5.1.2 Copyright versus Patent

Copyright policy was believed to present problems for the protection of software (e.g. the duration of protection is considered by some observers to be too long). Therefore for the software aspects of new media legislation, patent did not seem to be preferable as a protection mechanism. Some aspects of new media are already patentable (e.g. search functions), however, given the issues raised in the U.S. with the Compton NewMedia patent, namely market

competition and the ability to develop new products, patent law may sometimes protect new media developments at the expense of further product development and innovation.

The Canadian multimedia developers we interviewed do not seem to be concerned that their works in some cases could fall under both patent and copyright law (as well as trademark and other aspects of intellectual property). Each of these protections has specific conditions and terms, and both protection and clearance would involve both patent and copyright in some cases.

5.1.3 Establishing New Policies for Copyright

It would appear that the definitions in copyright policy should be "technology-neutral." For example, in the case of a signal right, if such a right is implemented, the definition needs to encompass more than just transmission by Hertzian waves (i.e. implement a definition as broad as that for "communication to the public by telecommunication"). This principle should be extended to any other digital manifestation of works to be copyright protected.

There is a need to define who is responsible for the material transmitted on the Information Highway, and who is responsible for the transmission: should the "packager" of material be responsible for what is transmitted and for tracking uses, or should the information provider? As discussed earlier, this is an on-going copyright infringement issue with respect Compuserv as the packager or host for information providers.

The question of "look and feel", while raised in interviews, did not seem to present a practical problem. Generally, while display rights have been discussed less in Canada than in the U.S., copyright observers feel that "look and feel" are part of the software and are copyright protected. Jurisprudence in Canada has yet to address the question, and further work needs to be done in this area.

As for the larger question of new rights specifically for multimedia, the existing copyright framework, while complex, protects multimedia works through protection for each type of work incorporated. Patent and trademark can protect further aspects of the multimedia work (e.g. logos, search functions and processes, etc.). In the interest of simplifying the policy for users and creators, though, it could be useful to add multimedia or new media to the categories of works listed in the *Copyright Act*. In the policy approaches discussed below, we examine the possibility of more fundamentally changing the Act to cover "works", without specifying types of works.

5.1.4 New Copyright Mechanisms

Canada's existing collectives and unions already handle rights clearance, royalty collection and payments. We have seen in some cases that they can adapt to a new media

environment (e.g. the case of CanCopy and the McMaster University bookstore) while not radically altering their means of operation. Rights tracking, however, becomes crucial for the collectives, if creators are to obtain the benefits from use of their works in multimedia and new media applications. Therefore, the collectives need to develop mechanisms to track works and rights, in order to become genuine "clearinghouses" for their members, and for new media producers.

While a "one-stop rights shopping" organization for clearing all new media rights might be attractive, it would be very costly and complex to establish. While there has been talk at WIPO meetings of establishing a central registry of audio-visual works on an international level, to date international agreement and implementation have not materialized. The prospects for a single rights registry in Canada are also somewhat distant. Rights holders agree, though, that there is a need on their part to share information among collectives and harmonize their registrations; this will become more significant if rental rights and/or neighbouring rights are implemented.

5.1.5 Moral Rights and Digitization

Some observers recognized that compression (or, at least, certain compression technologies) affects works as they are transmitted along the Information Highway. In a technical sense, therefore, digitization can affect the creator's moral rights, unless the creator agrees to authorize the carrier to compress and transform the work for the sole purpose of transmission. Agreement on this technical issue could be the subject of individual negotiation between rights holders and carriers, or could be made explicit in statute.

5.1.6 Understanding Copyright and Educating Stakeholders

Ultimately, there is a need on the part of creators, producers, distributors and users, to understand the copyright system: what rights are, how they are administered, how they can be cleared, and their economic value. Creators and producers need to know how rights are cleared, where they can be cleared, and how to determine the value of those rights.

The existing collectives and organizations representing rights holders (e.g. unions, associations) are already moving to help their members develop standard clauses for negotiating rights. However, there remains a concern that unauthorized uses of works can occur without the creator, or the user, being aware of the creator's rights. Users need to know what they can legitimately copy and what needs to be cleared. Given the absence of an informed public about copyright infringement in home use (tapes, software, etc) this problem will grow.

As a result, there is a need for education on the part of all these stakeholders. While organizations are involved in informing their constituents of copyright mechanisms, users in particular require an understanding of the bases of copyright and the impact of the policy on their activity. This is one role that government could play more actively as users adopt new media applications.

5.2 Policy Development Approaches

In light of these policy considerations, we present four approaches to policy development and consider their advantages and disadvantages. The intent of this section is not to present one single "ideal" solution, but rather, to present a number of possible alternatives, ranging from a wide "revamping" of copyright to policy "tinkering" with it.

5.2.1 Copyright Protection for New Media Ensured Exclusively by Contract

Certain observers believe that the copyright framework can accommodate non-digital media, but that digital media make copyright impossible to administer, and conceptually obsolete. In a world where electronic manifestations of "works" replace actual physical manifestations, issues such as importation, public performance and national jurisdictions are rooted in pre-digital copyright models. Moreover, according to this view, the difficulty in ensuring reliable payment, tracking of individual uses (without infringing on user privacy), and determining the value of a work, make copyright administration and practice unworkable. Even technological solutions to copyright, such as encryption, can prove ineffectual if technology can unscramble the encrypted transmission and make "piratized" copies available. Copyright policies and mechanisms only hold back the further development of new media applications and services.

Ultimately, according to this option, the perceived value of a work to a particular user will ensure that the work is used, and the principle of "if it's worth copying, then it's worth paying for" will prevail. In this world of unfettered use of digitized content, there will be some form of recompense devised for the creator and producer. In a sense, then, for the creator, ensuring public access and sales of product (physical or electronic) become more important as a marketing tool than receiving royalty payments or attempting to trace violations of the creator's moral rights. The market, in this view, determines how works will be used, who will be paid and how.

Contractual practices that incorporate new media or multimedia clauses into existing contracts are one way that the "market" addresses remuneration outside the strict policy framework of copyright. However, these contracts are based on the existing foundation of copyright policies, assuming that they apply to new media as well as traditional media. While some

observers would minimize changes to existing copyright policies, abandoning them altogether could deprive much of the incentive system for creators, producers, packagers and distributors.

Some of the technologies described in the previous chapter are also attempts to ensure that creators are paid for the use of their works and that users are billed for their use; even if copyright, for some observers, could be technologically "obsolete", technological solutions exist for the basic market issues of paying for uses and paying for products. Despite this view, there are important consequences of not resolving copyright questions on the Canadian information highway; these are discussed further in section 5.3 below.

5.2.2 Policy "Tinkering" and New Modes of Administration

Many observers saw a continued importance in using copyright to protect works, but in making small changes to the policy, and larger changes to the administration, to ensure that copyright remains relevant to new media. This would involve ensuring that future rights are technology-neutral. It could also involve addressing the question of "substantial portion" in the legislation, and perhaps the question of "fair dealing." It could further give government a role in encouraging education on copyright issues, for creators, producers, distributors and users. Finally, this option could involve the federal government lobbying, on the international front, for an international rights registry (for multimedia, audiovisual, or other categories of works) and supporting Canadian-based collectives to establish specific registries in the interim.

Essentially, though, this option would place the onus for modifying copyright practices on stakeholders themselves. It would involve ensuring that collectives share information, and that registration of works be done on a wider scale. It could also involve industry implementation of technologies that limit unauthorized reproductions and uses, track rights and determine payments. The Copyright Act allows for the creation of new collectives. If a collective is considered necessary, therefore, the industry might form its own for multimedia.

This "policy tinkering" scenario is not necessarily incompatible with the two other options presented below (revamping the copyright framework of devising a sui generis right for new media). Indeed, slight revisions to the copyright framework could precede more fundamental, longer-term reconsiderations of that framework.

5.2.3 A Revamped Copyright Framework

As we have seen in chapter 3, because copyright involves different types of works and different kinds of protection based on the nature of those works, the copyright framework could be considered complex and unmanageable. Some people argue, further, that with digitization, new media works are all essentially strings of ones and zeroes: works

become effectively equivalent, and do not require the complex regime that was established for non-digital media. As a result, these people would argue for a more fundamental reconsideration of the copyright framework than that envisioned in the previous set of policy options.

There are at least two ways of revamping the legislative framework. First, multimedia or new media works could be defined in the Copyright Act and regarded as another type of work, added to the list of "literary", "artistic", "dramatic", etc. Multimedia or new media works could then be covered under the same kinds of rights as other works. Certain specific aspects of new media rights could be addressed in the revised Act (e.g. a definition of "substantial" portion, a broader "fair dealing" provision, a signal right that specifically addresses communication by telecommunication), but otherwise, the same rights would exist for new media. In addition, with the addition of multimedia or new media to the types of works named in the Act, the Copyright Office could incorporate multimedia works as a specific category of works for registration purposes.

Second, the Copyright Act could be more fundamentally revised to address, not specific types of works, but just "works" (writ large) or "creations". In this case, all works would have the same copyrights, where relevant, and the regime would be harmonized (i.e. the same terms, exceptions and rights for each work, irrespective of the type of work).

Finally, government could encourage the creation of registries, and even a "registry of registries" that includes works of all types. This could involve the development, in collaboration with creators and industry, of a central registry, or it could involve facilitating the dissemination of software and general tracking mechanisms, so that each transaction is automatically recorded (this is the model of electronic commerce, or perhaps a CulTech-style intellectual property accounting "engine").

This revamping of the copyright framework could therefore address the specific challenges of new media and ensure that copyright can adapt to any kind of work. It can also help stakeholders (creators, distributors, producers, users) resolve the problems associated with the administration of copyright in new media.

5.2.4 A Sui Generis New Media Right²⁷

Given that neither patent nor copyright can protect all aspects of a multimedia database, for example, Canada could opt for the creation of a *sui generis* right for multimedia (or new media) works. The Canadian precedent lies in the *Integrated Circuit Topography Act* of 1990, which offers protection for electronic "chips."

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Sui generis is defined in the *Oxford* dictionary as "of its own kind, unique". Essentially, it means in this context the creation of a separate statute for a particular type of work.

Not all countries have such *sui generis* integrated circuit protection, and another *sui generis* right (in this case, for new media) would require international harmonization and coordination if it were to follow the model set by the international copyright conventions, such as Berne and the UCC. Already, though, the protection for integrated circuits is described in NAFTA, and therefore, international harmonization has begun. In the case of integrated circuits, NAFTA states that protection applies to layout designs of semiconductor circuits, or to articles incorporating protected circuits. The protection echoes copyright, in the sense that the rights holder has the right to prevent the unauthorized import, sale or commercial distribution of protected designs. The term of protection in NAFTA is between ten and fifteen years, which is shorter than both patent and copyright.

The *sui generis* new media right could therefore draw on the integrated circuit protection as outlined in NAFTA or in Canada's own *Integrated Circuit Topography Act*. It would allow a reconsideration of terms of protection (long enough to protect the creator, but short enough to allow for continuing innovation). It could also incorporate those aspects of multimedia databases that are valuable, but not copyrightable, such as the facts and information available on the database.

As with the revamped copyright option, though, the *sui generis* right would most likely require considerable attention to the definition of "new media" or "multimedia", to the fact that in a multimedia work, there are "layers" of rights holders (e.g. composers, authors, publishers, and, if there is a neighbouring right, producers and performers), whose works are still protected under copyright. While the *sui generis* right option was raised neither by stakeholders we interviewed, nor in our literature search, it could be presented as a way of retaining the existing copyright framework, which is familiar to creators, producers and users, for non-digital media; and addressing the particularities of new media in a specific statute.

5.3 Copyright, Content, and the Information Highway

While copyright policy is a major consideration in its own right, its relevance to the information highway is through its relationship to content. In general terms, copyright and related regulatory policies, and copyright mechanisms can greatly affect the development of content and the distribution of revenues derived from content. To describe how this is so we revisit the main elements in the information below.

Content versus communications

The new services and applications that are to be developed for the information highway will fall somewhere along two continua. In the first continuum, the two opposites are communications and content. Many applications are partly communications and partly content, while other applications are more strictly one or the other. Copyright, of course, concerns itself primarily with content oriented applications.

Entertainment versus information

In the second continuum, the content is either entertainment or information, or a mix of both. Hence, the new highway terms of "infotainment" and "edutainment". Games and much of television obviously lie in the entertainment category, while text and data bases will tend to be more information oriented. Copyright is important for both categories, yet may require different treatment for each.

Sequential versus interactive

As observed earlier, the defining feature of new media lies in its interactivity. Existing media are primarily sequential delivery of content in well defined rights transactions. Interactivity however, changes the structure of traditional media by interposing a new form of host or packager. That packaging function includes setting of terms of entry of new content into the marketplace and its marketing. It also encompasses the whole process of authorizing, collecting, and making payments to the rights holder and to the network from which the content was acquired by the end user.

The consequence is that the well understood physical delivery of content products will be structurally altered, and new functions added. Existing content stakeholders have reasons to be concerned about their role in the new structure. Those involved in physical delivery systems will be threatened, and those in electronic could see advertising and subscription support eroded by new media applications. Understanding what copyright regimes will be brought into play, and how copyright mechanisms will evolve is critical to the information highway content and network stakeholders.

Creating a marketplace for new media content

To meet the three objectives established by Industry Canada (innovation/jobs, culture/sovereignty, and low cost access), there needs to be a rapid development of new media. Barriers to content development and distribution must be removed in a way that fosters investment in content - especially Canadian content.

The major question facing information highway investors is whether there is a consumer market for new media content. Apart from television services and games, both of which have already been proven in the marketplace, it is unclear whether and how much people will pay for content.

The main challenge, then, is to create a content marketplace, i.e. one in which new services can be delivered at a price that meets investment costs and which attracts consumers. Internet growth is a true phenomenon, but it does not resolve the marketplace issue. Commercial data base and other content packagers have created substantial niche markets, but not mass markets.

Copyright and creation of a marketplace

Copyright policy and the development of appropriate mechanisms are fundamental to the creation of a content marketplace to give the Information Highway its *raison d'être*. Copyright policy will clarify the rules of the marketplace, and new copyright mechanisms and practices will facilitate the development of a marketplace. Investors (including creators) thrive on markets, and thus copyright has a key role to play.

Dealing with copyright issues is not an isolated activity, then. It cuts across many issues to be addressed by the new Advisory Council on the Information Highway. The Council might ideally establish a "content development" working group, which would examine the economic issues, i.e. the barriers and the possible incentives for new media development. Copyright policy and copyright mechanisms would be a central part of the work of such a working group.

Copyright's relevance to the other working groups

Returning to copyright as a specific issue, each of the subjects to be addressed by the Advisory Council has some copyright aspects.

Access and social impact issues, for example, include questions of ensuring privacy and providing information highway services to all Canadians. As the working group considers the ability of Canadians to protect personal information that is collected as a condition of access to new, transactional services, for instance, it could examine the ways of balancing protection of privacy against the need, in copyright terms, to collect information on access, use and copying of works.

The working group has suggested that "need to know" information be made free-of-charge on the information highway; the questions of protecting moral rights, reproduction rights and rights of communication to the public by telecommunications, are therefore relevant (perhaps, a "browsing" right could be implemented, thereby allowing people to browse a document without paying, but having them pay for copying, via downloading or printing).

A key universality objective is the creation of new content that is user friendly and accessible to households who can afford only modest investments in platforms. Again, this is a marketplace issue, since such content and its access will be developed more rapidly where copyright issues and practices are resolved.

The development and deployment of low cost new media services is complementary to concerns of the competitiveness and job creation working group. Canadian SMEs also require user friendly and modestly priced services in order to strengthen their international competitiveness (and hence put them into a position of hiring more personnel).

Copyright is crucial to Canada's economic competitiveness and job creation in another way, if copyright creators do not feel that their works are sufficiently "valued", through adequate remuneration, then they would see less value to creating in Canada. If users (including small and medium-sized enterprises) find the costs of administering copyright too onerous, then their own competitiveness is hindered by the copyright framework. Therefore, striking the appropriate balance between user's and creator's needs could be addressed as the working group looks at Canada's competitiveness on the information highway.

In terms of **research and development, applications and market development**, the technologies discussed in chapter 4 for creating intellectual property "accounting engines", could be incorporated into Canada's strategy for information highway applications. Standardized software that tracks "hits" and is easily incorporated into other new media applications, could, for example, be addressed as this working group considers copyright.

Copyright is often considered to be pigeonholed as a **cultural/Canadian content** issue. Certainly, Canada's creators have, through their collectives and contracts, experience in dealing with copyright questions and in looking at copyright as one of their means of remuneration and deriving value from their works. The working group has listed as one of its terms of reference the question of fair compensation to rights holders.

However, it is more than a rights issue. Along with regulatory policy, the organization of copyright policies has fundamental structural implications for Canadian cultural industries. In some respects the challenge is the creation of an effective marketplace in which Canadian creators and producers can be adequately compensated. The challenge is also to construct such a marketplace which strengthens the competitive position of Canadian cultural industry stakeholders.

In addition to the cultural objectives identified by the Advisory Council, there are those of **education and training**. The kinds of content development issues that cultural creators face -- fair compensation, protection of moral rights, and preventing unauthorized uses, for instance--- are issues that developers of educational and informational content must face as well. The kinds of issues that cultural content users face -- among them, transparent tracking mechanisms and affordable content -- are issues that educational and government users also face. However, there is a clear difference between the worlds of entertainment (cultural industries) and the more institutional users of new media, including education and training (and as well, medical services, government services, and scientific research). For example, copyright questions such as fair dealing and measuring "substantial portions" are of current concern in Canada's educational community, and would be perceived quite differently by them relative to the entertainment industry. The education and training applications may not be able to support the copyright clearance infrastructure that will be created by the entertainment industry. At the same time, creators will want to benefit from the growing use of new media for education and training.

5.4 Conclusions

The discussion in the previous subsection as to where copyright fits in Information Highway policy development illustrates the need to bring copyright into the broader policy-making arena. One way to approach this proposed broadening of copyright is to debate goals and principles for copyright policy. During the course of this study one formulation was developed, and is attached as Appendix C.

If copyright is to be relevant in the era of new media and multimedia, there are a number of practical and legal issues to be resolved. Depending on the scope of change that is realistic (tinkering, or a broad overhaul?), each of the policy development approaches presented above addresses some of these issues, but we have not presented any single "ideal" solution. While stakeholders have not themselves looked at certain options (e.g. the revamped copyright framework or the sui generis new media right), these options could be presented to them for discussion and consideration. Ultimately, however, as we address the copyright issues related to new media, we must recognize that, in fact, we cannot be sure how the new media will be adopted, at what pace, in what forms. Whatever copyright issues are resolved in the near to medium terms, we must ensure that they remain relevant for the longer, and less foreseeable, term.

Government can play a role in addressing copyright on the information highway. Education -- of users, creators, and distributors, on the principles and mechanisms of copyright -- is one area where government can become involved. It could further provide leadership and policy harmonization, to ensure that copyright objectives are linked to cultural development policies in general, and to education, research, and security considerations. As questions of copyright collectives and rights ownership become more acute on the information highway, government could provide seed investment for rights registries and pursue international initiatives in rights registries. Finally, government provides an important forum to the continued discussion of copyright issues as they evolve with the information highway -- through, for example, the Advisory Council. As described above, copyright issues address all subjects which have been organized into working groups.

What are the consequences of not addressing copyright matters on the information highway? On the level of Canadian content and culture, the consequences would be serious: copyright is a source of value for creators. If Canadian creators see no value in the work they create, because their work is insufficiently protected (in terms of both their economic and moral rights), then there will be less incentive to create.

There are also sound economic development reasons for addressing copyright in new media. There is a need to resolve the issues of buyers and sellers on the information marketplace, if the information highway is to provide Canadians with content that they need and want. With creation and innovation as the core of the knowledge economy, an adequate and effective copyright regime remains a crucial part of the underlying framework.

APPENDIX A
LIST OF INTERVIEWEES



Appendix A
List of Interviewees

Sandy Crawley
Association of Canadian Television
and Radio Artists (ACTRA)

Serge Turgeon
Union des artistes

John Lowry
Discus Knowledge Research

Philip Dodds
Interactive Multimedia

Jack Gray
Coalition of Creators and Copyright
Owners

Claudette Fortier
La coalition des créateurs et des titulaires
de droit d'auteur complete

Sandra MacDonald
Canadian Film and Television Producers
Association (CFTPA)

Gary Neal
Association of Canadian Publishers

Bill St. Arnaud
Vision 2000

Karen Kostaszak
Freenet

Paul Hoffert
CulTech Research

Howard P. Knopf
Canadian Intellectual Property Institute
(CIPI)

Zenaïde Lussier
Medialog

Raymond Descout
Centre for Information Technology
Innovation (CITI)

Merle Hudson
Open Learning Agency

Peter Skillen
North York Board of Education

Mike Murphy and Richard Cavanagh
Stentor Telecom

Jay Thomson
Canadian Cable Television Association
(CCTA)

Guy Beaudry
Groupe Videotron

Peter Miller
Canadian Association of Broadcasters
(CAB)

Blair MacKenzie
Southam

Sally Brown and Steve Wills
Association of Universities and Colleges of
Canada and
David McCallum
Canadian Association of Research Libraries

David Vogt
Science World

APPENDIX B
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APPENDIX C
OBJECTIVES AND PRINCIPLES

Appendix C Objectives and Principles

Prior to developing policies with regards to copyright and new media on the electronic highway system, governing objectives and principles may need to be established by the Government of Canada.

The objectives of policies governing copyright and new media services on the electronic highway system could be established as follows:

- To promote the rights of new media makers and to stimulate creative activity, as it is the basis for a knowledge-based economy, increases the number and quality of jobs, and is critical to national identity.
- To facilitate the sharing of information as it is key to society-building, democracy and learning, and is essential to a network-based economy, both for business users and consumers.
- To stimulate the deployment of new media services to serve Canada's economic development needs.

Related principles which serve as a basis for future legislation, policies, programs and so forth for the transmission of new media on the electronic highway system could include the following:

- Key stakeholders, including representatives of creators, suppliers and users, must agree to develop a consensus with respect to recommended approaches within a pre-determined period of time.
- Government must facilitate consensus between key stakeholders and ensure a balance of interests, including with respect to the general public.
- Fair remuneration to new media makers for their works must be ensured, as well as reasonable costs and clearance mechanisms for users.
- Potential for litigation must be reduced wherever possible.
- Developments in new media technologies, industry and markets must be monitored to ensure the validity of policy and implementation mechanisms.

These objectives and principles could enable the Government of Canada to give due recognition to all parties involved in the creation, transmission/distribution and use of digital media. In particular, the Government could recognize the following:

Recognition of Multimedia Creators

- The importance of the contribution of new media makers to the cultural, social, economic and political enrichment of Canada.
- The importance of granting to new media makers a status that reflects their role in developing and enhancing Canada's artistic and cultural life and in sustaining Canada's quality of life.
- The role of the new media maker.
- That new media creativity is the engine for growth and prosperity of a dynamic information industry in Canada.
- The importance to new media makers that they be compensated for the use of their works, including the public lending of them.

Recognition of Producers Under the Jurisdiction of the Federal Government

- The rights of new media makers and producers to freedom of association and expression.
- The rights of associations representing new media makers to be recognized in the law and to promote the professional and socio-economic interests of their members.
- The rights of new media makers to have access to advisory forums in which they may express their views on their status and on any other questions concerning them.

Recognition of Users of New Media on the Electronic Highway System

- That all users have full accessibility to new media services offered on the electronic highway system, at affordable rates.
- That all users are ensured information security, network reliability and privacy.

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